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Development of a Coding System to Accurately Categorize the  
Causes of Construction Fatalities and Serious Injuries

by

Caroline Louise Charlotte Pedersen

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of the requirements for the degree of

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## CHAPTER 1

### INTRODUCTION

There are approximately 910 construction worker fatalities in the United States each year (National Safety Council, 1995). Although construction workers constitute only 5.2% of the industrial workforce, they account for over 18.4% of the fatalities and 10.6% of the injuries (Gambatese 1996). The only industries that have higher fatality rates are mining and agriculture.

One of the functions of the Occupational Safety and Health Administration (OSHA) is to investigate and track occupational injuries and fatalities. OSHA's involvement is reduced in the state-plan states; however, these states are still encouraged to contribute such data to OSHA. This information is recorded in OSHA's Integrated Management Information System (IMIS). While various types of information are recorded, particular interest exists in the basic types of causes associated with fatalities and injuries. OSHA classifies all accidents into six event types: Falls, Struck by, Struck Against, Caught In or Between, Shock, and Other.

The accident classifications are designed to provide insight into causation. Despite this, it is felt that the current classification system has numerous shortcomings. The primary failure is that the six event types do not adequately categorize the actual accident causation. In fact, the category "other" historically has accounted for an exceptionally high percentage (about 10%) of incidents.

This thesis was undertaken to develop a system of cause codes to accurately categorize the primary causes of fatalities and related injuries in the construction industry. The information contained in the OSHA database can be extremely useful to contractors and safety professionals if it can be presented and summarized in a usable and detailed



format. If the actual causes of injury can be targeted and tracked, it is felt that the current fatality rate can be decreased significantly. Accurate information on the causes of accidents is fundamental to the success of such efforts.



## CHAPTER 2

### BACKGROUND

#### 2.1 INTRODUCTION

The Williams-Steiger Act, also known as the Occupational Safety and Health Act of 1970 (OSH Act), was passed by Congress to increase safety awareness in the United States, and contained special provisions for the construction industry due to the high proportion of fatalities occurring in construction. OSHA was formed and tasked with tracking accident statistics. OSHA created the Integrated Management Information System (IMIS) database to manage the information collected on accidents. This database is primarily used by OSHA to produce statistics. Considerable amounts of useful information can be generated from the database.

Currently, six categories (Falls, Struck By, Struck Against, Caught In or Between, Shock, and Other) exist for classifying the causes of accidents in the construction industry. These categories are very general and provide limited useful data since a wide range of accidents fit into each of the areas. The category "Struck Against" is essentially unused, while approximately 10% of the fatalities have been categorized as "Other". Accident classification information would be useful for safety managers and construction professionals if the information would be specific to their actual work classification and if the cause codes clearly defined the accident type.

In addition to the coded information related to injuries and fatalities, most OSHA accident investigation reports recorded in the OSHA IMIS database contain an abstract which summarizes the events surrounding the accident. These abstracts tend to consist of a single paragraph, written in a style comfortable to the individual investigating OSHA compliance officer.



## 2.2 LITERATURE REVIEW

Although extensive research has been conducted on how to reduce injury and fatality rates in the construction industry, very few have reviewed the OSHA coding system to determine if it contains clear and useful data.

Only a handful of literature sources were located which reference the OSHA coding system. The first of these was an "Analysis of Fatalities Recorded by OSHA" (Hinze and Russell 1995). In this paper, the authors used OSHA's IMIS to examine the causes of past injuries. It was felt that knowledge of past injury causation would help in preventing future injuries. The researchers used data from 1980, 1985, and 1990 to identify possible trends. While some trends were identified, the authors noted that the coding of event types appeared to be inconsistent and then provided numerous example cases. In their recommendations, they stated that the information contained in the database can only be helpful if it is clearly and consistently entered into the system. They further recommended that the coding system be examined to determine if a different coding system would be more appropriate. They felt that more accurately defined codes might allow for more consistency in the information entered into the database. This would make the resulting information more usable.

Several theses have identified the need for a revised coding system. In her thesis entitled "Investigation of Equipment Related Injuries and Fatalities in Construction", Bernadine I. Thomson (1996) recommended that the abstracts in the OSHA IMIS database be more clearly written and that the coding be more precise as to the primary cause of the accident.

David C. Bren (1995) analyzed construction fatalities and injuries due to powerline contacts in his thesis and recommended that more detail be included in the abstracts, as well as accuracy in data entry. He also noted the lack of accurate coding as a fault of the current system.



Katherine Bren (1996) completed her thesis on construction fatalities and injuries due to trench cave-ins. She strongly recommended a coding system which accurately reflects the primary cause of the accident. She found that "cave-ins" were placed in either "struck by", "caught in/between", or "falls" with no real consistency. She also recommended that the abstracts be more carefully written to eliminate the grammar and logic errors which were found in many abstracts. She felt that a standard form might eliminate some of the ambiguity the OSHA database currently contains as to the actual facts of each accident.

The final reference was a report prepared by OSHA (U.S. Department 1990). OSHA analyzed the causes of construction fatalities from 1985-1989 and made conclusions about the causes of fatalities in the construction industry (see Table 2.1).

Table 2.1 Construction Fatalities Investigated by OSHA from 1985-1989\*

Source of fatality (1)	Percentage of all fatalities (%) (2)
Falls	33
Electrical Shock	17
Struck by	22
Caught in/between	18
Other	10

\*From "Analysis of construction fatalities- the OSHA database 1985-1989", (U.S. Department 1990).

It is clear from Table 2.1 that the current coding system is extremely broad in nature since each code covers a wide range of accidents. For example, the code "Struck By" includes accidents involving equipment, handling of material, falling material, and cave-ins. The "Caught In/Between" classification includes numerous accidents involving equipment, material, cave-ins, and others. It becomes a "judgment call" for the investigating officer to place the accident into one of the event types. Additionally, the data is in such broad categories that it is of limited utility to the construction professional.



Most of the references listed above recommended four common items: 1) all states should be required to report their accident data to OSHA; 2) abstracts should be more clearly written; 3) data entry should be performed with more attention to detail; and 4) the coding system should be specific in nature. The goal of this thesis was to focus on the coding deficiencies and develop a new coding system to accurately classify the causes of fatalities and related injuries in the construction industry.



## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

The goal of this research was to develop a revised coding system to accurately categorize the causes of accidents and fatalities in the construction industry. The research was conducted in four stages: data acquisition from OSHA's IMIS, development of a new coding system, data compilation for the new codes, and data analysis. The development of the new coding system evolved into its final form during the data compilation stage and therefore, these two sections will be presented together.

#### **3.2 DATA COLLECTION**

OSHA maintains a database of fatalities and injuries occurring throughout the United States in various industries. The database used for this study was OSHA's IMIS which contains accident information on all industries. The database can present or sort various types of information. The data contains encoded information of various types, including victim age, craft, type of injury, amount of fine, amount of fine actually paid, etc. In addition, the database contains an abstract which is a narrative description of how the accident is presumed to have occurred. OSHA's Region 10 office isolated and sorted the data for all fatalities in standard industrial classification (SIC) codes 15, 16, and 17 (construction industry) for years 1994 and 1995. The data report included data from January, 1994 through December, 1995. The data provided by Region 10 included 894 pages of information which resulted in 954 incidents over the two year period. The following information was provided in the OSHA reports: location, date, SIC, type of citation, abatement status, amount of penalty, abstract of the incident, age and sex of the victim, event type, extent of injury, environmental factor, human factor, and hazardous factor. In addition, the database contained information of the violations, penalties and correctional actions required of the employer.



### 3.3 DEVELOPMENT OF THE NEW CODING SYSTEM AND DATA COMPILATION

The current OSHA construction injury event types include the following: (1) Falls; (2) Struck By; (3) Struck Against; (4) Caught In/Between; (5) Shock; and (6) Other. Since these codes were assumed to not adequately describe the various causes of injury and death, modifications were sought. Using the six OSHA categories as a baseline, refinements were made. The initial revised coding system was developed as shown in Table 3.1.

Table 3.1 Event Types- Version 1

Cave-in	Confined Space
Drowning	Heavy/Earth Moving Equipment
Electrocution- OH power lines Faulty Tools/Cords Other	Falls- Temporary Structures Permanent Structures Other
Lockout/Tagout- Electrocution Mechanical Other	Material Handling Equipment- Surface Equipment Manual (Equipment not Responsible) Cranes/OH Equipment

Using these revised codes, the 1994 data began to be evaluated and the cause of death was described by assigning the new code categories to the fatality cause. After reviewing 30 cases, it was found that the codes in Table 3.1 did not adequately describe the causes of death for all cases. As a result, the checklist shown in Table 3.2 was developed. This checklist, as it evolved, contained 15 cause codes that could be viewed as primary, with additional information providing extra details that would further describe the circumstances at the time of the accident. This checklist was used to categorize the first 120 cases. A Microsoft Access database was used to contain the data generated for each case number.



Most information used to assign the proper cause codes was contained in the case abstracts. Unfortunately, some of the abstracts were so poorly written that the facts of the accident could not be deciphered from the text. In other instances, the abstract would be repeated verbatim for two different companies and incidents. These duplicated cases were discarded from the database.

Table 3.2 Checklist- Version 2

<b>Event Types- Check one of the following:</b>		
<input type="checkbox"/> Asphyxiation (toxic gases)	<input type="checkbox"/> Drowning	
<input type="checkbox"/> Caught in/between Equipment	<input type="checkbox"/> Caught in/between Material	
<input type="checkbox"/> Cave-in (excavation/tunneling)	<input type="checkbox"/> Cave-in (trench)	
<input type="checkbox"/> Electrocution (faulty existing wiring)	<input type="checkbox"/> Electrocution (power lines)	
<input type="checkbox"/> Electrocution (faulty const. tool/wiring)	<input type="checkbox"/> Other	
<input type="checkbox"/> Fall from elevation	<input type="checkbox"/> Fall from ground level	
<input type="checkbox"/> Struck by equipment	<input type="checkbox"/> Struck by falling Materials	
<input type="checkbox"/> Struck by material		
<b>Respond to all of the following:</b>		
Lockout/Tagout?	yes	no
Confined Space?	yes	no
Cause involved other crew members?	yes	no
Type of large equipment involved? (equip w/ a driver- scraper, dozer, etc)		
Type of tools or small equip.involved? (hammer, wrench, hand compactor, saw, etc)		
Number of workers injured and/or killed?		
Type of materials involved?		
Type of materials handling?	<u>  </u> hoisting/lowering <u>  </u> moving laterally <u>  </u> altering	
Temporary structure involved?		
Permanent structure involved?		
Type of project?	<u>  </u> new construction <u>  </u> repair <u>  </u> renovation <u>  </u> unknown	



After the first 120 cases had been encoded, "Explosion/Fire" and "Natural Causes" were added as event types. The secondary category "Other crew members involved" changed to "others involved". Further evaluation was conducted using the added cause code categories. At case number 185, three other secondary sections were added- "Fall height/Trench Depth", "Fall Protection/Shoring/Personal Protective Equipment (PPE) used", and "Caused by the subject". The last major changes to the checklist were made at case number 400. Under event types, an "Electrocution-Other" category was added for cases which were clearly electrocutions but did not fall into one of the other electrocution sections, and "Electrocution-building power" was added for those accidents which involved a building power system which was functioning properly. Secondary sections were also added: age and sex of the subject, SIC, number of workers injured separated from number of workers killed, natural factors such as weather, vehicle type (project vehicle or privately owned vehicle), and type of work performed by the subject at the time of the accident. A comments category was added for those cases where supplemental information was required to explain how the subject was killed or injured. The final checklist is shown in Chapter 4.

The resulting database contained 954 records which included 976 fatalities and 106 related injuries.

### **3.4 DATA ANALYSIS**

The data from the Microsoft Access database was exported to Microsoft Excel for analysis. The data was examined to determine how the fatalities were distributed among the 19 cause codes. In addition, the revised coding system was checked or validated. This was done by first selecting (at random) thirty cases from the OSHA database. The information from these cases was given to two graduate students at the University of Washington who had no knowledge of either the current OSHA system or the revised system. The objective of having graduate students use the codes served as a means of



validating the revised cause codes. Each student was asked to classify the causes of OSHA fatalities by using the revised coding system. Instructions for the checklist were provided as shown in Appendix A. The following chapter summarizes the findings of both the data analysis and audit.



## **CHAPTER 4**

### **RESULTS**

#### **4.1 INTRODUCTION**

The current OSHA coding system consists of six event types. This research was undertaken to develop a new coding system with more specific categories to more accurately classify the causes of accidents and fatalities in construction. The new coding system will be presented, followed by the findings from using this new coding system on OSHA's data for 1994-1995.

#### **4.2 NEW CODING SYSTEM**

The final version of the revised coding system consisted of a checklist of causes as shown in Table 4.1. There are nineteen primary causation factors which are used for classifying the event type which caused the accident. In addition, secondary causation and related factors are included to provide additional information surrounding the accident. These include information such as sex and age of the victim, the type of project, etc..



Table 4.1 Checklist, Final Version

<b>Primary Event Types- Check one of the following:</b>	
<input type="checkbox"/> Asphyxiation (toxic gases)	<input type="checkbox"/> Drowning
<input type="checkbox"/> Caught in/between Equipment	<input type="checkbox"/> Caught in/between Material
<input type="checkbox"/> Cave-in (excavation/tunneling)	<input type="checkbox"/> Cave-in (trench)
<input type="checkbox"/> Electrocution (faulty existing wiring)	<input type="checkbox"/> Electrocution (power lines)
<input type="checkbox"/> Electrocution (other)	<input type="checkbox"/> Electrocution (faulty const. tool/wiring)
<input type="checkbox"/> Electrocution (building power)	<input type="checkbox"/> Explosion/Fire
<input type="checkbox"/> Fall from elevation	<input type="checkbox"/> Fall from ground level
<input type="checkbox"/> Struck by equipment	<input type="checkbox"/> Struck by falling Materials
<input type="checkbox"/> Struck by material	<input type="checkbox"/> Other
<input type="checkbox"/> Natural Causes	

<b>Secondary Information- Respond to all of the following:</b>	
Lockout/Tagout? <u>yes</u> <u>no</u> <u>na</u>	Confined Space? <u>yes</u> <u>no</u> <u>na</u>
Fall height: _____ (feet)	Fall protection used? <u>yes</u> <u>no</u> <u>na</u>
Personal Protective Equipment used? <u>yes</u> <u>no</u> <u>na</u>	Trench shoring used? <u>yes</u> <u>no</u> <u>na</u>
Trench Length: _____ (feet)	Trench Depth: _____ (feet)
Others involved? <u>yes</u> <u>no</u> <u>unknown</u>	Caused by the subject? <u>yes</u> <u>no</u> <u>unknown</u>
Type of large equipment involved? _____ (equip w/ a driver- scraper, dozer, etc)	Type of tools or small equip.involved? _____ (hammer, wrench, hand compactor, etc)
Vehicle Type: <u>project</u> <u>private</u> <u>na</u>	Number of workers killed? _____
Number of workers injured? _____	Natural factors: _____ (wind, rain, lightning, heat, etc)
Time of accident: _____ AM/PM	Sex of subject: _____
Age of subject: _____	Type of materials involved? _____
Type of materials handling? <u>hoist/lower</u> <u>lateral</u> <u>altering</u>	Type of Project: <u>new construction</u> <u>repair</u> <u>renovation</u> <u>unknown</u>
Temporary structure involved?	Permanent structure involved? _____
Work Type: _____ (painter, electrician, etc)	SIC: _____
Comments:	(if none, so state)



Table 4.2 demonstrates how the original six event types relate to the new primary event types. As is shown, the new system contains nineteen event types and provides more specific codes for the actual accident. Electrical Shock translates into five different electrocution event types (building power, faulty construction tool/wiring, faulty existing wiring, power lines, and other). Falls divide into Falls from Elevation and Falls from Ground Level. The Struck by event type now consists of Struck by Equipment, Falling Material, and Material, while Caught in/between contains Caught in/between Equipment and Material. A completely new cause code was created, Cave-ins, which contains incidents which used to fall under either Struck by or Caught in/between. The event type Other shows the most diversity since it now contains miscellaneous codes such as Asphyxiation, Drowning, Explosion/Fire, Natural Causes, and Other. The event type Struck Against is never used by OSHA and has been included in the codes Struck by and Caught in/between.



Table 4.2 Relationship Between Original Event Types and New Coding System

Original system	New system
Electrical Shock	Electrocution (building power) Electrocution (faulty const. tools/wiring) Electrocution (faulty existing wiring) Electrocution (power lines) Electrocution (other)
Falls	Falls from elevation Falls from ground level
Caught in/between	Caught in/between Equipment Caught in/between Material Cave-in (Excavation/Tunneling) Cave-in (Trench) (* Cave-ins may have also been coded as a Struck by Incident)
Struck by	Struck by Equipment Struck by Falling Material Struck by Material
Struck Against	Contained in above category
Other	Miscellaneous: Asphyxiation Drowning Explosion/Fire Natural Causes Other



#### 4.3 FINDINGS USING THE NEW CODING SYSTEM- PRIMARY EVENT TYPES

With the use of the new coding system, the 1994-1995 data was analyzed by determining the primary causes of construction worker fatalities. The analysis was conducted independently for the 1994 data and the 1995 data. There were 691 fatalities and related injuries in 1994, and 391 in 1995.

Figure 4.1 depicts the results of using the new coding system on the data from 1994. Note that the causation factors have been consolidated into broader groupings for comparison with earlier data. The majority of the fatalities and related injuries were in the event type "Falls" (33%), followed by Electrocutions (18%), Struck by (18%), Miscellaneous (15%), Caught in/between (10%), and finally, Cave-ins (6%).

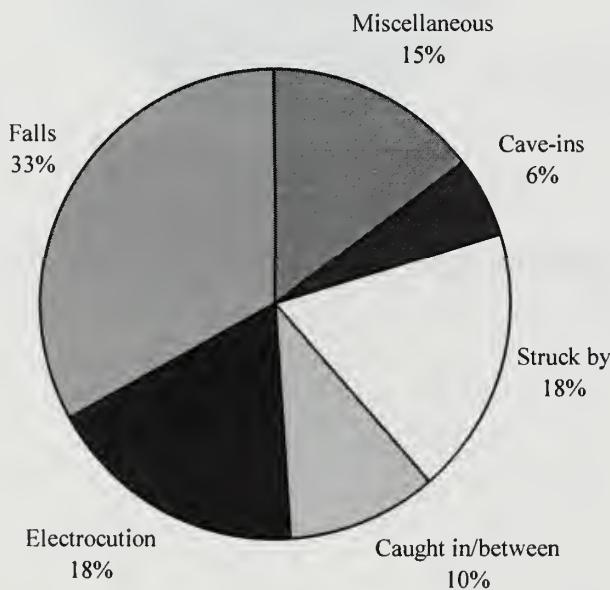


Figure 4.1 Construction Fatalities and Related Injuries, 1994



Figure 4.2 shows the results of using the revised coding system on the 1995 data. The percentages changed slightly, with Falls increasing to 35%, Electrocutions up to 23%, and Struck by incidents at 19%. Caught in/between remained constant at 10%, while Miscellaneous dropped to 9%, and Cave-ins fell to 4%.

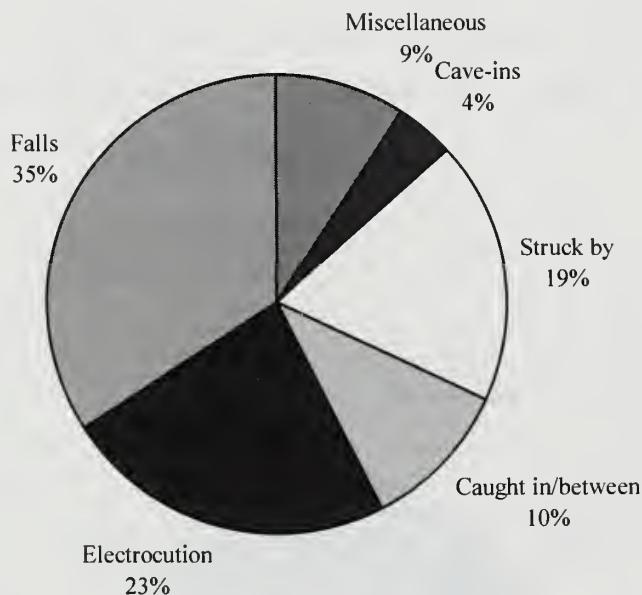


Figure 4.2 Construction Fatalities and Related Injuries, 1995



The total results for 1994-1995 in Figure 4.3 can be compared to the OSHA findings from 1985-1989 as shown in Figure 4.4. The percentage of accidents attributable to the event type "Falls" is slightly higher in this study when compared to the 1985-1989 analysis (34% vs 33%) as is "Electrocutions" (20% vs 17%). The event types Struck by, Caught in/between, and Other are lower (18% vs 20%, and 10% vs 20%, 1% vs 10%, respectively). These reductions can be assumed to be the result of using the new coding system. By expanding the primary event types from six to nineteen, the actual causation can be more accurately pinpointed. As a result, the new categories removed some of the accidents from the Struck by, Caught in/between, and Other categories and placed them in one of the Miscellaneous or Cave-in categories.

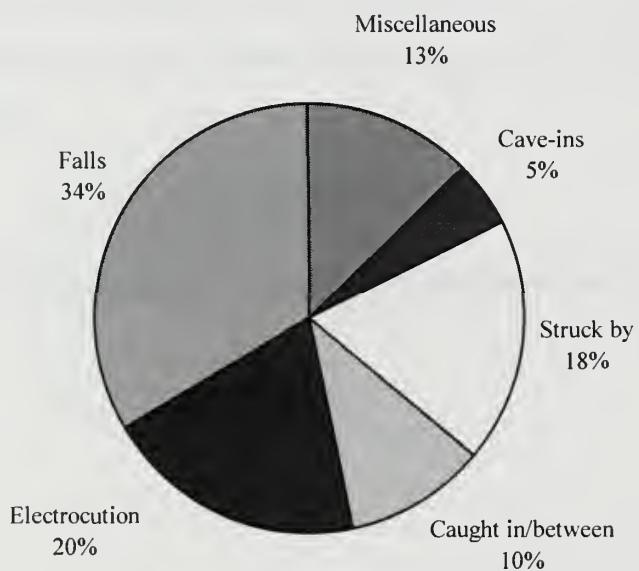


Figure 4.3 Total Construction Fatalities and Related Injuries, 1994-1995



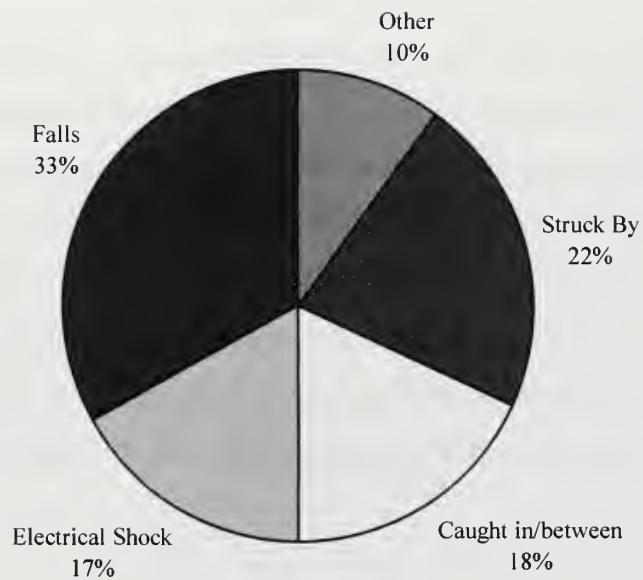


Figure 4.4 Construction Fatalities Investigated by OSHA 1985-1989 (From "Analysis of construction fatalities- the OSHA database 1985-1989", (U.S. Department 1990))

Each primary event type will be analyzed further in the following subsections.



#### 4.3.1 FALLS

Falls accounted for 34% of the total fatalities and related injuries with the new coding system. The vast majority of these falls took place from elevation; in fact, only two out of 363 falls in the database were from ground level, see Figure 4.5. In 1995, 35% of the total fatalities and related injuries were from falls as compared with 33% in 1994; however, the total number of fatalities/injuries was significantly lower in 1995 than in 1994. In 1995, new regulations went into effect concerning fall protection, and the number of fatalities and injuries was expected to decline. Although the actual number of incidents did decrease, it appears that the decrease was across all of the event types and as a result, falls still account for the same percentage of fatalities/injuries as was found in 1985-1989.

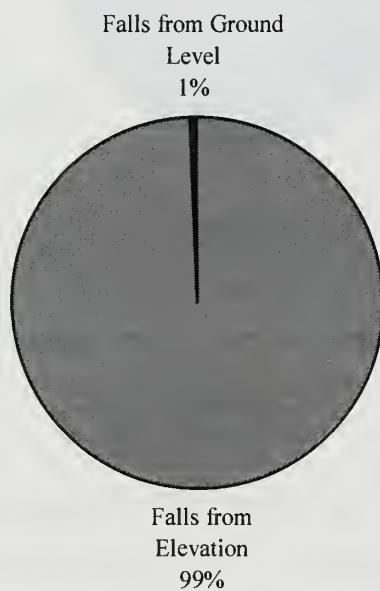


Figure 4.5 Fall Fatalities and Related Injuries, 1994-1995



#### 4.3.2 ELECTROCUTIONS

In 1994, 18% of the fatalities were attributable to electrocutions. In 1995, this number increased to 23%. The total percentage for both 1994 and 1995 was 20%, which is slightly higher than the figures obtained from the 1985-1989 OSHA statistics. Figure 4.6 depicts the percentage of electrocutions attributable to each of the specific event types.

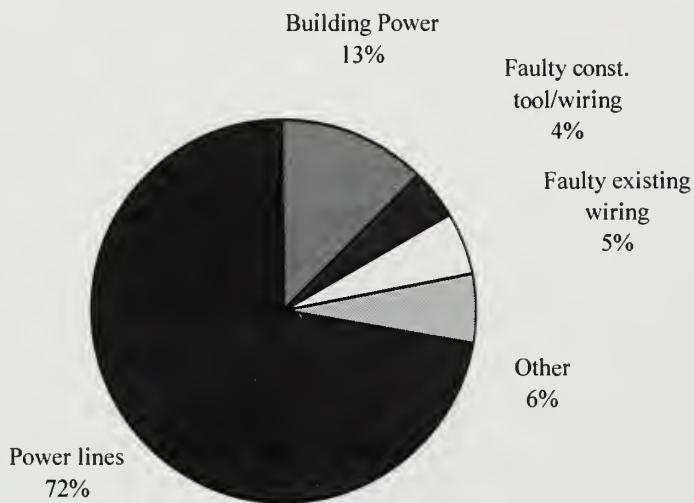


Figure 4.6 Electrocution Fatalities and Related Injuries, 1994-1995

Power line accidents accounted for the majority of the fatalities at 72%, followed by building power-related accidents at 13%. The category "Other" contained incidents which were obviously electrocutions but did not fall into any of the four specific areas, e.g. an electrician was working on an energized transformer and was electrocuted. This incident does not fall under power lines, building power, faulty existing wiring, or faulty construction tools/wiring, but is an electrocution. Therefore, it is classified as an



Electrocution-Other. Faulty existing wiring accounted for 5% and Faulty construction tools/wiring contained the remainder of the electrocutions at 4%.



#### 4.3.3 STRUCK BY

Struck by was the third most prevalent event type. In 1994, 18% of the fatalities and related injuries were attributed to struck by accidents. This percentage increased slightly in 1995, to 19%. The total for both 1994 and 1995 was 18%. This figure is 3% lower than the statistics gathered by OSHA from 1985-1989. The new coding system is probably responsible for this change as the addition of the categories "cave-ins" and "explosion/fire" splits the data out into more specific categories. Figure 4.7 shows the results of the subcategories of the Struck by event type:

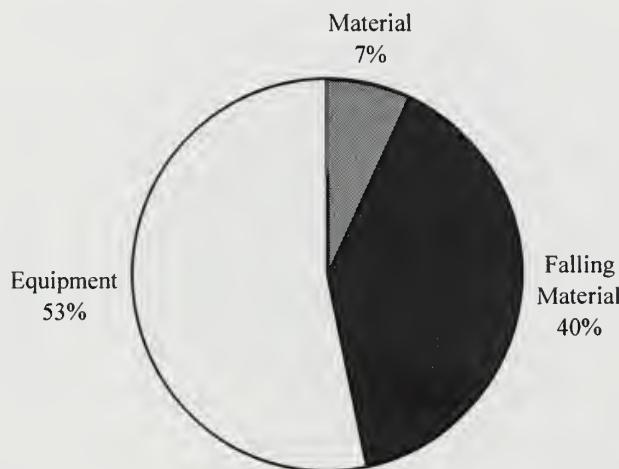


Figure 4.7 Struck by Fatalities and Related Injuries, 1994-1995

The majority (53%) of the accidents fall under the Struck by Equipment category, followed by Struck by Falling Material at 40%. Struck by Material contains the smallest percentage of incidents at 7%. A good example of Struck by Material is when a plug inserted into a pressurized pipe fails and strikes a worker. This subcategory of the Struck by event type is the one most subject to controversy. It is often difficult with some



abstracts to determine whether an accident was a Struck by Material or a Caught in/between Material.



#### 4.3.4 CAUGHT IN/BETWEEN

The caught in/between event type contained 10% of the total fatalities and related injuries for 1994 and 1995. This was significantly lower than the data gathered from 1985-1989, and is most likely attributable to the new coding system which provides more specific codes to describe events which were previously categorized as Struck by, Caught in/between, and Other codes. Figure 4.8 shows the breakdown of this code.

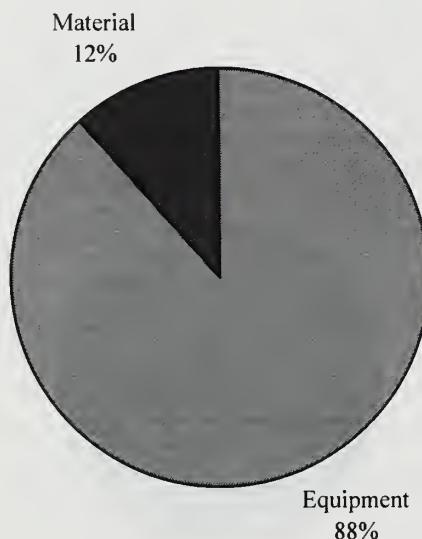


Figure 4.8 Caught in/between Fatalities and Related Injuries, 1994-1995

The vast majority of incidents fell into the Caught in/between Equipment category (88%) when compared to the Caught in/between Material subcategory (12%). As was previously mentioned, categorizing incidents into codes of Caught in/between Materials and Struck by Materials codes can be confusing. Instructions are provided in Appendix A for reference.



#### 4.3.5 CAVE-INS

Cave-ins is a new code which is not currently used by OSHA, and therefore cannot be compared with previous data. However, 5% of all of the total fatalities and injuries for 1994-1995 can be attributed to this event type, which equates to nearly 50 fatalities each year. This fact alone is sufficient to justify the existence of the code. Figure 4.9 depicts the subcodes related to this event type.

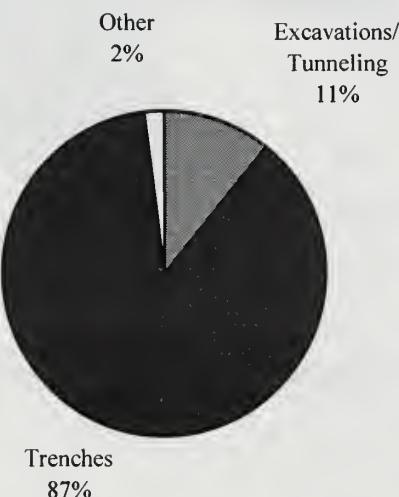


Figure 4.9 Cave-in Fatalities and Related Injuries, 1994-1995

As can be seen from the figure, most of the cave-in fatalities and injuries occurred in trenches (87%). In almost every instance, the trench was not properly supported by either sloped sides, trench boxes, or shoring. In some cases, a trench box was in place but the victim stepped out of the protected area and was caught by a cave-in.



#### 4.3.6 MISCELLANEOUS

The code Miscellaneous is used to describe many of the event types which were previously contained under "Other" (Figures 4.10, 4.11, and 4.12).

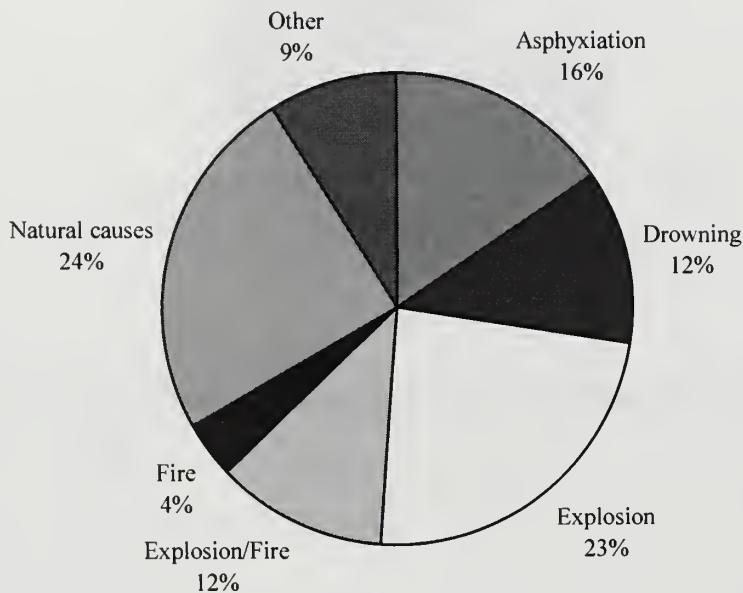


Figure 4.10 Miscellaneous Causes of Construction Fatalities and Related Injuries, 1994



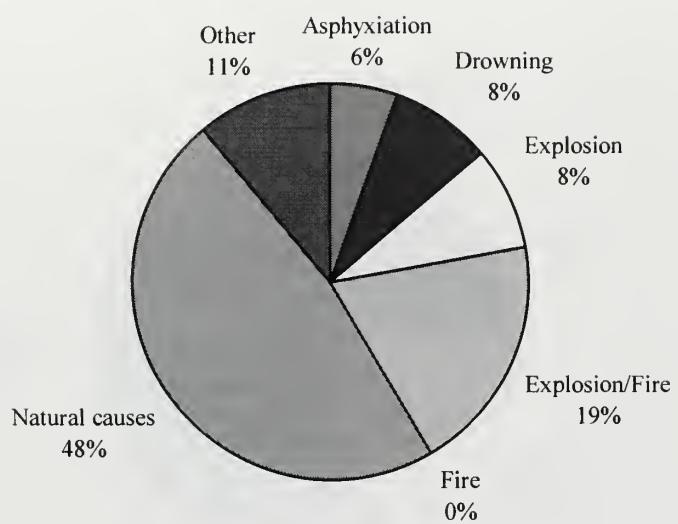


Figure 4.11 Miscellaneous Causes of Construction Fatalities and Related Injuries, 1995



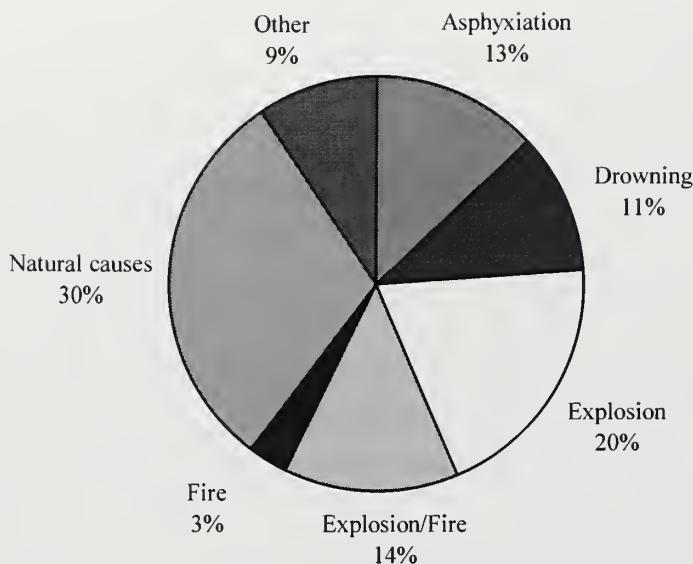


Figure 4.12 Total Miscellaneous Causes of Construction Fatalities and Related Injuries, 1994-1995

The Miscellaneous event types accounted for 13% of the total number of fatalities and related injuries for 1994 and 1995. When these numbers were broken down into their actual codes, the percentages occurring in each specific code were lower than the 5% attributed to Cave-ins. The most prevalent event type was Explosion/Fire which represented 37% of the miscellaneous causes and less than 5% ( $37\% \times 13\%$ ) of all fatalities and related injuries. It is shown as three separate event types (Explosion, Fire, and Explosion/Fire) for ease of coding but should be considered as one event type. This is followed by Natural Causes at 30%, Asphyxiation at 13%, Drowning at 11%, and finally, Other at 9% of the miscellaneous cases. In the 1985-1989 data, "Other" accounted for 10% of the total number of fatalities. The new coding system reduced this figure to 1.2% ( $9\% \times 13\%$ ) of the total number of accidents. The reduction of the



proportion of the fatalities categorized in the nondescriptive category of “Other” shows a significant improvement with the new coding system.



#### **4.4 FINDINGS USING THE NEW CODING SYSTEM- SECONDARY FACTORS**

The 1994-1995 data was evaluated using the final version of the checklist shown in Table 4.1. The checklist has two sections, the first for the primary event type, and the second to describe the events surrounding the accident. The secondary factors include such information as whether lockout/tagout was in effect, if a confined space was a factor, if PPE, shoring, or fall protection was used, the age and sex of the victim, how many people were killed or injured, the time of the accident, the occupation or work type, the SIC code of the employer, types of materials and materials handling, type of project, permanent and temporary structures, type of vehicle, large equipment, and small equipment, and a comments section if additional information is needed. Table 4.3 provides a summary of the secondary findings gathered from the database for 1994-1995. Note that in many instances, the abstract from OSHA did not contain the information required and therefore, data from that accident was not included in the results.



Table 4.3 Secondary Factors

Factor	Comments
Lockout/Tagout	Used Properly: 3 cases (1.5% of lockout/tagout cases) Used Improperly: 3 cases (1.5% of lockout/tagout cases) Not Used: 193 cases (97% of lockout/tagout cases)
Confined Space	21 cases considered confined space
Fall Height	Average: Greater than 6 feet
Trench Depth	Average: 11.5 feet (42 incidents)
Age	Average: 33.4 years (954 incidents)
Sex	Male: 947 cases (99%)
Time	AM: 145 cases (50%) PM: 144 cases (50%)
Others Involved	325 cases (34%)
Subject caused	541 cases (57%)
Equipment Type	Project: 354 cases (37%) Private: 21 cases (2%) None: 579 cases (61%)
Material Handling	Lateral: 256 cases (27%) Altering: 93 cases (10%) Hoisting: 93 cases (10%) None: 512 cases (54%)
Type of Project	New construction: 250 cases (26%) Repair: 138 cases (14%) Demolition: 44 cases (5%) Renovation: 9 cases (.9%) Remodel: 2 cases (.2%) Unknown: 523 cases (55%)



#### **4.4.1 LOCKOUT/TAGOUT**

Lockout/Tagout refers to situations in which the equipment or electrical supply should have been secured prior to working on the system. The database contained 199 incidents which involved lockout/tagout situations. In 193 of these accidents, lockout/tagout was not used when it should have been. In three incidents, lockout/tagout was used improperly and resulted in fatalities. In three other accidents, the lockout/tagout procedure was used properly but the work still resulted in a fatality. For example, one electrician properly locked out the electrical system but was killed by built up inductive current.

#### **4.4.2 CONFINED SPACE**

Confined spaces are loosely defined as those spaces which have or could have deficient oxygen content, and also those spaces with limited ingress and egress. In this study, trenches and other areas with limited ingress and egress were not considered confined spaces. Oxygen content was the only consideration, and it was found that 21 cases met these requirements for a confined space. Of these, ten were classified as Asphyxiations, eight were Explosion/Fires, one was a Drowning, and two were considered Others. In four incidents, confined space was not considered a factor in an Asphyxiation.



#### **4.4.3 FALL HEIGHT AND FALL PROTECTION**

The majority of falls had an elevation change of more than six feet. Only two falls occurred at the same level as they originated (falls from ground level), and 17 falls were from one to six feet. In 17 cases of Falls from Elevation, the height of the fall was not specified.

The database revealed that fall protection equipment was worn quite often; however, it appears that it failed more regularly than other PPE (15 incidents) and improper use accounted for a high percentage of accidents (24 incidents, or nearly 7% of all falls from elevation). New regulations concerning fall safety went into effect in 1995 and this might account for the common use of the fall protection systems. Due to the high percentage of failures and improper usage, employers may want to focus their attention in this area to prevent future injuries and fatalities.

#### **4.4.4 OTHER PPE**

PPE consists of fall protection systems, hardhats, steel-toed boots, breathing apparatus for confined spaces, reflective clothing, electrical rubber gloves, and others. Fall protection was discussed in the preceding paragraph. In analyzing the data from 1994-1995, five cases of Asphyxiation were attributable to the lack of PPE. PPE failed and resulted in fatalities in only one instance of Asphyxiation and one instance of Electrocution.



#### **4.4.5 TRENCH DEPTH AND SHORING**

In previous research (Bren, 1996), it was found that trench length and depth were the critical factors for cave-ins. Width was not a major factor influencing cave-in occurrences. Data in this research effort was collected on trench depth but not on length. Length has been added to the final checklist in Table 4.1 for future use. In analyzing the data from 1994-1995, the average trench depth for 42 Cave-in event types was 11.5 feet. Only one of these cave-ins was using a proper shoring system which failed. Out of the remaining 41 cases, six were either using an improperly constructed shoring system or the subject had left the protected area of the trench and was caught in a Cave-in.

#### **4.4.6 AGE AND SEX OF THE SUBJECT**

The average age for the victims in the database was 33.4 years of age. Out of the 954 fatalities in the database, only seven were women. Of these seven female fatalities, five were flaggers who were struck by either a private vehicle or a project dumptruck. In the remaining two cases, one involved an equipment operator in a rollover accident (Caught in/between Equipment) and the other involved the wife of a contractor who was helping stage electrical switchgear in his absence and was Caught in/between Material.



#### 4.4.7 TIME OF THE ACCIDENT

An analysis of the database showed that only 285 incidents contained the time of the accident in the abstract. Figure 4.13 shows the distribution of fatalities at various times throughout the day. The highest number of injuries and fatalities occurred between the hours of 11:00 AM and 12:00 PM.

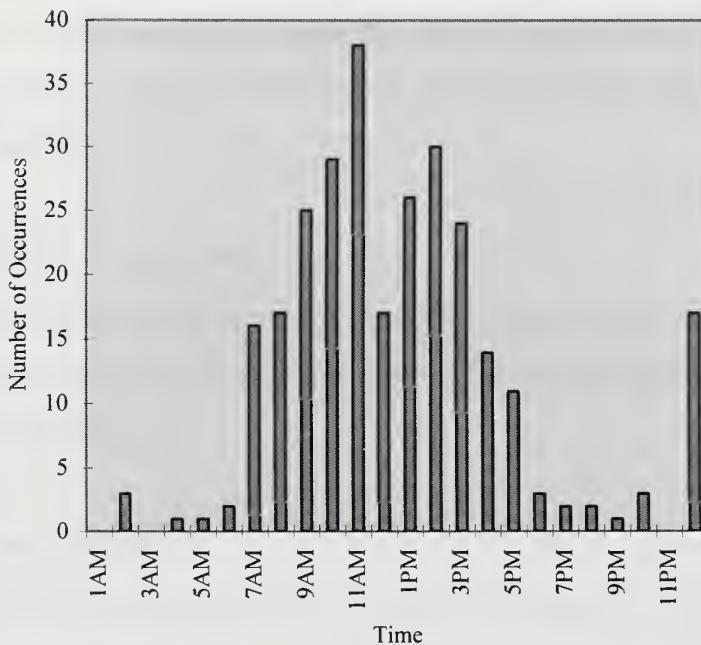


Figure 4.13 Time Distribution of Fatalities and Related Injuries

#### 4.4.8 OTHERS INVOLVED

"Others involved" refers to those incidents where another person was involved in the events surrounding the fatality. Others were involved in 34% of the accidents included in the database.



#### **4.4.9 CAUSED BY THE SUBJECT**

In 57% of the fatalities in the database, the subject "caused" the accident. This factor was not intended to focus the blame for the accident on the individual but rather classify whether others caused the accident.

#### **4.4.10 EQUIPMENT TYPE**

An analysis of the equipment types shows that 94% of the accidents involving equipment were project related. The accidents which involved private vehicles were typically highway construction/repair projects.

#### **4.4.11 MATERIAL HANDLING**

Three types of material handling were entered into the database (lateral, hoisting, and altering). Lateral movement (58%) was responsible for the majority of the incidents involving material handling.

#### **4.4.12 TYPE OF PROJECT**

The type of project was known in 443 incidents. Of these, 56% were new construction projects. Repair projects followed with 31% of these cases.

#### **4.4.13 ANALYSIS OF WORK TYPE AND EVENT TYPE**

The database was sorted on work type and event type to determine which cause codes each trade was susceptible to in the construction industry. The major work types were carpenters, concrete workers, crane maintenance, welders/cutters, spotters (lifting operations), drywall installers, electricians, elevator repairers, equipment mechanics, equipment operators, flaggers, HVAC mechanics, masons, sheet metal workers, painters, plumber/pipefitters, roofers, and steel workers. It was often difficult and sometimes impossible to determine what the subject's occupation was at the time of death or injury and those cases were not included. Table 4.3 shows the breakdown of work type compared to event type.



Table 4.4 Analysis of Major Event Types for Large Occupation Types

Work Type	Event Type	(% of total)	Total # of Incidents
Carpenter	Fall from Elevation	(67.4)	46
	Struck by Falling Material	(17.4)	
Concrete worker	Struck by Equipment	(27.3)	11
	Struck by Falling Material	(18.2)	
	Fall from Elevation	(18.2)	
Crane Maintenance	Caught in/between Equipment	(100)	7
Welder/Cutter	Fall from Elevation	(32.1)	28
	Explosion/Fire	(25)	
	Natural Causes	(10.7)	
Spotter	Electrocution (power lines)	(48.6)	35
	Struck by Falling Material	(17.1)	
	Struck by Equipment	(11.4)	
Drywall Installer	Fall from Elevation	(76.9)	13
	Natural Causes	(15.4)	
Electrician	Electrocution	(63)	106
	Power lines	(40)	
	Building power	(13)	
	Other	(7)	
	Fall from Elevation	(26.4)	
Elevator Repairer	Fall from Elevation	(33)	12
	Struck by Falling Material	(33)	
Equipment Mechanic	Caught in/between Equipment	(82)	17
	Struck by Equipment	(11.7)	
Equipment Operator	Caught in/between Equipment	(50.5)	101
	Electrocution (power lines)	(9.9)	
	Struck by Equipment	(8.9)	



Table 4.4 Analysis of Major Event Types for Large Occupation Types (Continued)

Work Type	Event Type	(% of total)	Total # of Incidents
Flagger	Struck by Equipment	(100)	14
HVAC Mechanic	Electrocution (building power)	(33)	12
	Fall from Elevation	(33)	
Mason	Fall from Elevation	(76.5)	17
Sheet Metal Worker	Fall from Elevation	(58.3)	12
	Electrocution (power lines)	(16.7)	
Painter	Fall from Elevation	(50)	20
	Electrocution (power lines)	(25)	
Plumber/Pipefitter	Cave-in (trench)	(50)	52
	Electrocution (faulty exist wiring)	(9.6)	
	Fall from Elevation	(7.7)	
Roofer	Fall from Elevation	(82.4)	74
	Electrocution (power lines)	(10.8)	
Steel Worker	Fall from Elevation	(74.4)	39
	Struck by Falling Material	(12.8)	

An analysis of Table 4.3 shows that the event type Falls from Elevation was the predominant cause of fatalities and injuries for carpenters (67.4%), welders/cutters (32.1%), drywall installers (76.9%), elevator repairers (33%), HVAC mechanics (33%), masons (76.5%), sheet metal workers (58.3%), painters (50%), roofers (82.4%), and steel workers (74.4%). The occupational types of carpenter, drywall installer, mason, sheet metal worker, painter, and roofer should pay particularly close attention to these statistics since they account for at least half of all fatalities and injuries in their fields.



The second leading cause of injuries and fatalities was Electrocutions. This event type accounted for 48.6% of the incidents involving spotters, 63% of the cases involving electricians, and 33% of the HVAC mechanic incidents. Of those cases involving electricians, the majority (40%) were due to power line contacts.

The event type "Struck by" accounted for the third highest percentage of incidents. Struck by Equipment was the leading cause of fatalities and injuries amongst concrete workers (27.3%) and flaggers (100%). Struck by Falling Material was responsible for 33% of the fatalities and injuries in the elevator repair occupation.

Caught in/between Equipment was the leading cause of injury and death amongst equipment mechanics (82%), equipment operators (50.5%), and crane maintenance workers (100%).

The final event type was Cave-ins. This event type accounted for 50% of the incidents involving plumbers and pipefitters.

The information contained in this section allows safety professionals and managers to focus their safety efforts on the primary causes of fatalities for certain trades in the construction industry.



#### **4.5 AUDIT OF THE NEW CODING SYSTEM**

Sixty total cases were given to two test participants to determine whether the results of the new coding system could be duplicated by others. Ideally, there should be considerable consistency between the coding allocations being made by different individuals. The participants coded their cases and these results were compared to the data collected and coded for this study. Collectively, 92% of the codings were the same. The differing codings primarily represented ambiguity between the Struck by and Caught in/between cause codes, which was expected since it is often difficult to distinguish between the two categories. When the ambiguity was noted, the instructions for the checklist were further clarified. For example, a speed of 5 miles per hour or higher was a descriptor that was added to define a Struck by Equipment event type; however, a rollover accident (regardless of speed) was nearly always a Caught in/between Equipment event type. Additionally, the definition for "Fall from Ground Level" (falling into a hole, etc.) was expanded due to some confusion on the part of one of the test participants.



## CHAPTER 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 SUMMARY

This study focused on the development of a new coding system to classify the primary causes of fatalities and accidents in the construction industry. While OSHA uses a system with six event types; the revised coding system has nineteen primary event types, and twenty-three secondary factors which further define the events surrounding the accident.

#### 5.2 CONCLUSIONS

The current OSHA coding system consists of six event types, Falls, Electrical Shock, Struck by, Struck Against, Caught in/between, and Other. This research developed a revised coding system consisting of 19 primary event types. The new coding system was tested against the OSHA data from 1994-1995, and then audited by two University of Washington graduate students. Based on this analysis, it can be concluded that the new system removes the ambiguity surrounding the actual cause of injury and death by expanding the causation event types. In addition, the secondary factors in the revised coding system clarify the events surrounding the accident and provide a level of detail that is missing from the current system. As a result, the data is more usable by construction and safety professionals and allows them to focus on the actual causes of injury and death on the job site.



### 5.3 RECOMMENDATIONS

The following recommendations are made:

- OSHA should implement the new coding system for classifying construction industry accidents involving fatalities and serious injuries. The information gathered under the new coding system should be distributed to the construction industry to assist in reducing fatality and injury rates.
- OSHA should provide training to all accident investigators who are responsible for data entry prior to implementing the new coding system. It is important that the event types be clearly understood, especially the Struck by and Caught in/between categories, and training will ensure consistency in data entry between the investigators.
- Further research should be conducted on the secondary factors of the new cause code checklist, especially the work type and SIC codes to identify risk groups. OSHA should sort the new database by work type or SIC and provide this information on a periodic basis to the construction industry. Awareness of the primary cause of death associated with each work type or SIC should provide the information by which managers and supervisors can reduce the number of serious injuries and fatalities in the construction industry. In addition, research could be conducted on equipment statistics such as whether the equipment was moving, being worked on, or hauling at the time of the accident, and whether the equipment was operating in the forward or reverse direction.
- Care should be taken in data entry to prevent typographical or informational errors in the new database. In order for the information to be used effectively, it must be entered accurately.



- All states should be required to submit their accident data to OSHA, and it should be in the form of the new checklist. The current database is incomplete since all states do not submit their accident data to OSHA.



## REFERENCES

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Gambatese, John A., Addressing Construction Worker Safety in Project Design, Doctor of Philosophy Dissertation, University of Washington, 1996.

National Safety Council, Accident Facts, 1995 Edition.

Thomson, Bernadine I., Investigation of Equipment Related Injuries and Fatalities in Construction, Thesis, University of Washington, 1996.



## APPENDIX A

### Instructions for Checklist

Block 1: ID number corresponding to case number.

Block 2: Fill in with one of the following event types to classify what **caused** the fatality/injury accident. In some instances, the cause of the accident might not be the actual cause of death; the cause may have triggered a chain of events which lead to the fatality.

Asphyxiation	Caught in/between Equipment
Caught in/between Materials	Cave-in (trench)
Cave-in (excavation)	Drowning
Electrocution (power lines)	Electrocution (faulty existing wiring)
Electrocution (building power)	Electrocution (other)
Explosion/Fire	Fall from Elevation
Fall from Ground Level	Natural Causes
Struck by Equipment	Struck by falling material
Struck by material	Other
Electrocution (Faulty construction tools/wiring)	

Description of event types:

Asphyxiation: Fatality/injury caused by some gas or toxic material that prevents normal breathing. Example: Welders entered confined space with low oxygen levels without any personal protective equipment (PPE). Breathing ceased due to lack of oxygen.



Caught in/between Equipment: Fatality/injury caused by slow moving or nonmoving equipment. Includes accidents involving moving equipment parts, or accidents involving slow moving equipment and a nonmoving object such as the ground. Example: Employee tried to climb up into a moving dozer by stepping on the tracks. Worker was pulled underneath the equipment.

Caught in/between Material: Fatality/injury caused by slow or nonmoving materials. Example: Employee was blocking a job trailer. One of the supports shifted and the trailer crushed the employee who was working underneath.

Cave-in (trench): Fatality/injury caused by a collapsing trench. A trench is a long, narrow excavation which should have sloped walls or be supported by shoring across the trench or a trench box if it exceeds 4' in depth. Example: Pipefitter was laying pipe in a ten foot deep trench without shoring or cave-in protection. Walls gave way and buried the pipefitter under five feet of soil.

Cave-in (excavation): Fatality/injury caused by a collapsing excavation. An excavation is generally wide and therefore cannot be supported across the excavation. Example: Employee was pile-driving in an excavation. The wall collapsed, pinning the worker against the pile-driver.

Drowning: Self-explanatory. Example: Equipment operator was reinforcing the berm around a lake; ground gave way and the dozer and operator sank to the bottom of the lake.

Electrocution (power lines): Fatality/injury caused by contact with either overhead or buried power lines. Also includes contact with electrical lines when working on substations and transformers. Example: Painter moved a ladder from one side of the house to the other; contacted overhead power line in the process.



Electrocution (building power): Fatality/injury caused by contact with the building power. Example: HVAC mechanic was installing duct work; drilled into floor joist to secure the ductwork and made contact with the building power.

Electrocution (faulty construction tool/wiring): Fatality/injury caused by contact with a tool with exposed wiring or faulty ground system. Example: Worker took a light into a crawl space of a house knowing that the light had a faulty cord. The cord fell into standing water and electrocuted the worker.

Electrocution (faulty existing wiring): Fatality/injury caused by contact with existing wiring which has some fault. Example: A worker was pulling ductwork in the attic and was electrocuted due to ungrounded wiring in the house.

Electrocution (other): Fatality/injury caused by electrocution but it does not fall into any of the other electrocution categories. Example: Employee was working on a malfunctioning waterheater without locking/tagging it out. Water leaked from a pipe and flooded the electric spaces, electrocuting the employee.

Explosion/Fire: Fatality/injury caused by an explosion or fire. Example: Welder cut into a tank which had not been adequately purged of confined gases. The tank exploded and started a fire.

Fall from elevation: Fatality/injury caused by a fall which involves an elevation change, usually a fall from any height above ground level. Example: Roofer misjudged the edge of the roof and fell from an elevation of twenty feet. Example: Plumber misjudged the edge of the trench and fell into the excavation.



Fall from Ground Level: Fatality/injury caused by a fall from the ground. Can also include falls that take place on some structure above the ground but the fall does not leave that elevation. Example: Plumber was working on third floor of building and tripped while walking and impaled himself on third-floor slab rebar.

Natural Causes: Fatality/injury caused by natural causes and over which the employer would generally be assumed to have no control. In some cases, the employer might have taken steps to prevent the fatality, e.g., heat stroke. In those cases where preventative measures might have been utilized, a note is made in the "Natural factor" column to indicate heat, wind, etc. In addition, a note is made in the last block to indicated what caused the death. Examples: heart attack, heat stroke, stroke, etc...

Struck by Equipment: Fatality/injury caused by equipment traveling at speeds in excess of 5 mph. Example: Flagger was struck by a semitruck while controlling traffic for a construction project.

Struck by Material: Fatality/injury caused by material moving laterally. Example: A pipe plug under pressure released from the pipe and struck the employee.

Struck by Falling Material: Fatality/injury caused by falling material. Example: Wind blew a newly-placed concrete wall over and onto a carpenter passing by.

Other: Fatality/injury which does not fall into any of the other categories. Example: Plumber died mysteriously under crawl space; no toxic materials were detected and oxygen levels were sufficient. Since cause of death is unknown, it is classified as "other".

Block 3: Lockout/Tagout employed: If applicable, fill this block in as "yes" if locked out and tagged out, "no" if not properly locked out/tagged out, and "NA" if not applicable.



Block 4: Confined Space: Fill this block in as "yes" if it was a confined space, "no" if the space was not confined, and "NA" if not applicable.

Block 5: Fall height: Fill this block in with one of the following: ground, 1-6', >6', or "NA" if not applicable.

Block 6: Trench depth and length. Fill in the actual trench depth and length. If not applicable, fill in "NA".

Block 7: Fall Protection/Shoring/PPE utilized: Fill in "yes", "no", or "NA" if not applicable.

Block 8: Others involved in the Accident: This is to indicate if any persons, other than the victim, were involved in the accident. Fill in "yes" or "no". The other persons could include crew members or others as long as they were directly involved with the accident.

Block 9: Caused by Subject: This is to indicate if the victim contributed in a major way to the cause of the accident. Fill in "yes" or "no". This question is not intended to focus blame on the individual but classify whether others caused the accident. An example of an accident caused by the victim is when a roofer misjudges the edge of the roof and falls. An example of an accident not caused by the victim is when a flagger is acting within the scope of his/her duties and is struck by a passing vehicle.

Block 10: Type of Large Equipment involved: This block should be filled in with the appropriate type of large equipment involved with the accident. Large equipment includes equipment which requires a driver. Examples: bulldozer, excavator, vehicle, dumptruck, scraper, crane, forklift etc..



Block 11: Vehicle or Equipment Type: Fill in "project" or "private" if large equipment or a vehicle was involved in the accident. Project equipment/vehicles include any equipment used on or for the project discussed in the abstract. A private vehicle/equipment includes equipment which was not involved in the project in the abstract.

Block 12: Type of Tools/Small Equipment involved: List any tool or small type of equipment involved in the accident. Small equipment does not normally involve a driver.

Block 13: Number of workers killed: This is self explanatory and should include the victim.

Block 14: Number of workers injured: This is self explanatory and should include all injured persons, but not those that are fatally injured.

Block 15: Natural Factors: Any natural event that affects the accident, e.g., lightning, wind, heat, etc.. If none are involved, state "none".

Block 16: Time of accident: The actual time should be listed in this block

Block 17: Sex of the worker. The sex of the victim(s) is listed.

Block 18: Age of the worker. The age of the victim(s) is listed.

Block 19: Type of Materials Involved: List the materials directly involved with the accident, or state "none". Examples are wood, concrete, steel, toxic materials, etc..



Block 20: Type of Materials Handling: If a material was listed in block 18, the type of handling should be listed in this block. The following codes should be used: hoisting (also includes lowering), lateral, or altering. If there was no materials handling, state "NA".

Block 21: Temporary Structures Involved: Temporary structures include ladders, scaffolds, temporary platforms, etc. List the type or state "none".

Block 22: Permanent Structure Involved: Permanent structures include buildings, houses, warehouses, highways/roadways, etc. The permanent structure should be the one the project is centered around.

Block 23: Type of Project: Types of projects include new construction, repair, remodel, and demolition.

Block 24: Work Type: This block should be filled in with the type of work the individual is doing at the time of the accident. For example, a pipefitter can be working on a vehicle which falls off its jacks and lands on him/her. The work type would then be equipment maintenance. The following are common types of work: equipment operator, equipment mechanic, spotter (crane/lifting operations), roofer, painter, electrician, plumber/pipefitter, metal worker, welder/cutter, communication worker, HVAC mechanic, sheetmetal installer, laborer, supervisor, elevator repairer, demolisher, concrete worker, mason, carpenter, asbestos worker, sider, flagger, drywall installer, or insulator. If it is unclear what the worker was doing at the time of the accident, state "unknown".

Block 25: Standard Industrial Classification (SIC) code: List the SIC code for the work classification. It is a four number code corresponding to the type of company employing the worker.



Block 26: Comments: Any comments that will clarify the situation surrounding the accident. Examples are overturning equipment, fall protection that fails, equipment with faulty backup alarms, etc.

**General Rules:**

If more than one report is made on a fatality or injury incident because of multiple victims, a notation should be made to cross-reference the reports to each other. This should be properly coded so that a subsequent data analysis would not count fatalities or injuries more than once.



## APPENDIX B

Autos	Loss	Cost	14	PPH	Cath	Soda	1.8	1.8	toxic sm.	%	80ft	Time	Age	status	Math	Temp	Season	From	1796-97	Work	Type	Page	846	
Autos	lost	Spent	1000	used	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Asphyxiation	na	na	na	no	yes	none	none	hose	1	0	none	3:30	PM	48	liquid ammonia	lateral	none	building	unknown	unknown	unknown	unknown	1799	
Asphyxiation	na	yes	na	partial	yes	no	none	none	breathing apparatus	2	0	none	unkno	wn	M.M. 38.7	nitrogen	none	reactor	repair	welders	welders	1799		
Asphyxiation	na	yes	na	na	no	yes	none	none	none	1	0	none	unkno	wn	M. 50	oxygen deficiency	none	highway sign	new construction	unknown	unknown	1542		
Asphyxiation	na	no	na	na	yes	yes	none	none	none	2	0	none	unkno	wn	M.M. 62.7	monoxide	none	house	unknown	hvac mechanics	hvac mechanics	1711		
Asphyxiation	no	no	na	no	yes	no	none	none	none	1	0	none	7:20	AM	M. 39	gas	none	furnace	unknown	unknown	unknown	1629		
Asphyxiation	na	yes	na	na	no	yes	no	none	water chiller, copper line cutters	1	0	none	unkno	wn	M. 37	freon	none	building	repair	hvac mechanic	hvac mechanic	1711		
Asphyxiation	na	yes	na	na	no	yes	none	none	propane torch	1	0	none	unkno	wn	M. 26	asphalt	none	none	roofer	roofer	roofer	1761		
Asphyxiation	na	yes	na	no	no	yes	none	none	air packs	1	2	none	unkno	wn	M. 23	H2S	none	Natural gas pipeline	unknown	welder/cutter	welder/cutter	1623		
Asphyxiation	no	yes	na	yes	yes	no	none	none	none	1	0	none	10:00	PM	M. 31.36	none	none	medical clinic	unknown	plumber/pipe fitters	plumber/pipe fitters	1799		
Asphyxiation	na	no	na	na	no	yes	none	none	none	1	0	none	7:00	AM	M. 41	paint	altern	building	unknown	painters	painters	1721		
Asphyxiation	na	yes	na	no	no	yes	none	none	chain hoist	1	0	none	unkno	wn	M. 22	gases	none	none	unknown	plumber/pipe fitter	plumber/pipe fitter	1623		
Asphyxiation	no	no	na	no	yes	no	none	none	none	1	0	none	9:30	PM	M. 27	chemical	hosting scaffold	unknown	unknown	spotters	chemical plant repair	1541		
Asphyxiation	na	yes	na	na	no	no	yes	no	none	1	0	none	unkno	wn	M. 32	acetone cyanhydrin	none	none	none	ammonia analyzer repair	ammonia analyzer repair	1799		



Asphyxiation	na	yes	na	na	no	yes	none	none	generator	1	0	none	unkno	wn	M	46	carbon monoxide	none	none	building	unknown	electrical	1731			
Caught in/between equipment	na	na	na	na	no	no	yes	none	dumptruck	project	none	1	0	none	unkno	wn	M	46	none	none	unknown	unknown	equipment operator	171		
Caught in/between equipment	na	na	na	na	no	yes	none	none	dozer	project	none	1	0	none	unkno	wn	M	21	none	none	unknown	unknown	equipment operator	1629		
Caught in/between equipment	na	na	na	na	no	yes	none	none	front loader	project	none	1	0	none	unkno	wn	M	17	rebar/concre	lateral	none	unknown	unknown-laborer?	171		
Caught in/between equipment	na	na	na	na	no	yes	none	none	excavator	project	none	1	0	none	1-50	PM	M	57	dirt	lateral	none	retention pond	repair	equipment operator	1629	
Caught in/between equipment	na	na	na	na	no	no	yes	none	crane	project	boom	1	0	none	8.00	PM	M	57	steel beams	altering	none	unknown	new construction	operations	1629	
Caught in/between equipment	na	na	na	na	no	no	yes	none	excavator	or, barges	project	none	1	0	none	unkno	wn	M	40	barges	lateral	none	cribbing to elevate barge	none	equipment operator	1629
Caught in/between equipment	na	na	na	na	yes	no	yes	no	semitractor/trailer	project	none	1	0	none	unkno	wn	M	49	none	none	none	none	new crane	operations	1629	
Caught in/between equipment	na	na	na	na	yes	yes	no	yes	grader	project	none	1	0	none	unkno	wn	M	67	none	none	none	none	new crane	operations	1629	
Caught in/between equipment	na	na	na	na	no	yes	yes	no	dumptruck	project	none	1	0	none	unkno	wn	M	50	none	none	none	none	new crane	operations	1629	
Caught in/between equipment	na	na	na	na	yes	no	yes	no	backhoe	project	none	1	0	none	unkno	wn	M	33	none	none	none	none	new crane	operations	1629	
Caught in/between equipment	na	na	na	na	yes	yes	no	yes	water truck	project	none	1	0	none	unkno	wn	M	25	none	none	none	none	new crane	operations	1629	
Caught in/between equipment	na	na	na	na	no	yes	yes	no	crane	project	none	1	0	none	unkno	wn	M	61	boiler tubes	hosting	none	none	plumber/pipe fitter locking door	171		
Caught in/between equipment	na	na	na	na	no	yes	yes	yes	backhoe	project	none	1	0	none	11.25	AM	M	43	none	none	unknown	unknown	driller	1781		
Caught in/between equipment	na	na	na	na	no	yes	yes	yes	backhoe	project	none	1	0	none	unkno	wn	M	61	boiler tubes	hosting	none	none	equipment operator	171		
Caught in/between equipment	na	na	na	na	no	yes	yes	yes	backhoe	project	none	1	0	none	unkno	wn	M	11.25	none	none	unknown	unknown	equipment operator	171		



Caught in/between equipment	na	na	na	na	na	yes	no	crane, pickup	project	none	1	0	none	unkno	wn	M	20	none	none	none	unknown	unknown	equipment mechanic	1794	
Caught in/between equipment	na	na	na	na	na	no	yes	trackhoe	project	none	1	0	none	unkno	wn	M	54	none	none	none	unknown	unknown	equipment operator	1795	
Caught in/between equipment	na	na	na	na	na	no	no	excavat or	project	none	1	0	none	unkno	wn	M	42	none	none	excavation	bridge	demolition	operator	1795	
Caught in/between equipment	na	na	na	na	na	no	no	dump truck	project	hammer	1	0	none	11.25	AM	M	30	none	none	none	unknown	unknown	equipment mechanic	1794	
Caught in/between equipment	na	na	na	na	na	no	yes	front end loader	project	ts	1	0	none	1.30	PM	M	44	pipe	hoisting	none	none	unknown	unknown	equipment operator	1794
Caught in/between equipment	na	na	na	na	na	no	yes	dozer	project	levelling pipe	1	0	none	unkno	wn	M	35	none	none	none	none	none	equipment operator	1542	
Caught in/between equipment	na	na	na	na	na	no	yes	crawler	project	none	1	0	none	7.30	AM	M	43	soil	none	trench	none	none	unknown	operator	1794
Caught in/between equipment	na	na	na	na	na	no	no	bobcat loader	project	none	1	0	none	5.00	PM	M	30	soil	hoisting	none	house	new construction	snow removal	operator	1794
Caught in/between equipment	na	na	na	na	na	no	yes	loader	project	none	1	0	none	8.30	AM	M	44	snow	lateral	none	area	parking	snow area	operator	1542
Caught in/between equipment	na	na	na	na	na	no	yes	backhoe	project	none	1	0	none	unkno	wn	M	40	bolt	swing cam	altering	none	unknown	unknown	operator	1629
Caught in/between equipment	na	na	na	na	na	no	yes	trailer	project	ramp	1	0	none	unkno	wn	M	57	none	none	none	unknown	unknown	truck driver equipment operator	1794	
Caught in/between equipment	na	na	na	na	na	no	yes	dump truck	project	none	1	0	none	unkno	wn	M	24	none	none	none	none	none	operator	1771	
Caught in/between equipment	na	na	na	na	na	no	yes	ck, front end loader	project	tow chain	1	0	none	8.45	AM	M	61	none	none	none	unknown	unknown	unknown hooking tow chain	1794	
Caught in/between equipment	na	na	na	na	na	yes	no	truck, dump truck	project	none	1	0	none	unkno	wn	M	51	none	none	none	unknown	unknown	equipment mechanic	1794	



Caught in/between equipment	na	na	na	no	yes	dozer	project	none	1	0	none	unkno	M	24	none	none	none	unknown	unknown	unknown	equipment operator	1794
Caught in/between equipment	na	na	na	no	yes	endload er	project	none	1	0	none	unkno	M	36	none	none	none	unknown	unknown	unknown	equipment operator	1794
Caught in/between equipment	na	na	na	no	no	dozer, trailer	project	none	1	0	none	unkno	M	51	dozer	hoisting	none	unknown	unknown	unknown	equipment operator	1794
Caught in/between equipment	na	na	na	no	no	or, low bed	project	none	1	0	none	7.25	M	50	excavator	hoisting	none	unknown	unknown	unknown	equipment operations	1794
Caught in/between equipment	na	na	na	no	no	trailer	project	none	1	0	none	10.10	M	55	dolly	hoisting	none	none	none	unknown	truck driver	1791
Caught in/between equipment	na	na	na	yes	no	lowboy trailer	project	none	1	0	none	unkno	M	52	none	none	none	none	none	none	equipment mechanic	1622
Caught in/between equipment	na	na	na	yes	no	crane	project	pile hammer	1	0	none	9.15	M	57	none	none	none	none	none	none	mechanic/op	1629
Caught in/between equipment	na	na	na	no	yes	excavat or	project	none	1	0	none	unkno	M	43	none	none	none	none	none	none	operator	1794
Caught in/between equipment	na	na	na	no	yes	dozer, flatbed trailer	project	none	1	0	none	unkno	M	37	key pin (hinge for boom)	none	none	none	none	none	crane maintenance	1623
Caught in/between equipment	na	na	na	no	yes	crane	project	hammer	1	0	none	11.00	M	36	none	none	none	none	none	none	equipment operator	1623
Caught in/between equipment	na	na	na	no	no	bulldoz er	project	none	1	0	none	1.30	M	19	hang pins	altering	none	none	none	none	crane maintenance	1629
Caught in/between equipment	na	na	na	yes	yes	crane boom	project	hammer	1	0	none	unkno	M	28	none	none	none	none	none	none	mechanic	1623
Caught in/between equipment	na	na	na	no	yes	crane	project	hammer	1	0	none	unkno	M	27	none	none	none	none	none	meat storage	1629	
Caught in/between equipment	na	na	na	no	yes	bobcat	project	none	1	0	none	unkno	M	42	none	lateral	rack	unknown	unknown	operator	1623	
Caught in/between equipment	na	na	na	no	yes	forklift	project	none	1	-	none	unkno	M	42	none	none	none	none	none	mechanic	1629	



Caught in/between equipment	na	na	na	no	yes	loader	project	forklift attachment	1	0	none	AM	20	none	none	none	unknown	unknown	equipment operator	1622	
Caught in/between equipment	na	na	na	no	yes	crane	project	none	1	0	none	wn	M	28	headache ball	hoisting	none	none	spoiler	1622	
Caught in/between equipment	na	na	na	no	yes	tractor	project	none	1	0	none	AM	M	56	earth	lateral	none	roadway	repair	equipment operator	1611
Caught in/between equipment	na	na	na	no	yes	trailer	project	jacks	1	0	none	wn	M	36	none	none	none	none	repair to job trailer	1623	
Caught in/between equipment	na	na	na	no	yes	and pickup truck	project	none	1	0	none	wn	M	26	none	none	forklift to lift p/up off ground	none	equipment mechanic	1711	
Caught in/between equipment	na	na	na	no	yes	forklift	project	none	1	0	none	wn	M	36	none	none	conveyor system/rock	mountain road	equipment operator-mason	1741	
Caught in/between equipment	na	na	na	yes	yes	hopper for conveyor project	skiploader	1	0	none	wn	M	36	none	none	none	garage retaining wall	new construction	inspector/test eng/grader	1623	
Caught in/between equipment	na	na	na	no	yes	c speed swing (crane?)	project	none	1	0	none	PM	M	36	none	none	hopper	new	construction	1623	
Caught in/between equipment	na	na	na	no	yes	high lift loader	project	none	1	0	none	wn	M	40	none	none	none	unknown	unknown	Equipment operator	1521
Caught in/between equipment	na	na	na	no	yes	truck	project	none	1	0	none	wn	M	27	none	lateral	none	none	unknown	unknown (SIC 1731-)	1731
Caught in/between equipment	na	na	na	no	yes	backhoe	project	none	1	0	none	wn	M	37	none	none	none	roadway	telephone	new construction	1731
Caught in/between equipment	na	na	na	yes	no	trencher	project	none	1	0	none	wn	M	29	none	none	none	oil/gas well	new	SIC 1731-electrical	1731
Caught in/between equipment	na	na	na	yes	yes	forklift	project	none	0	1	none	AM	M	43	people	hoisting	working	platform building	unknown	equipment operator	1743
Caught in/between equipment	na	na	na	no	yes	loader	project	none	1	0	none	wn	M	57	none	none	none	driveway	new construction	equipment operator	1794



Caught in/between equipment	na	na	na	na	no	yes	lowboy trailer	project position	1	0	none	AM	M	30	none	none	none	none	unknown	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	backhoe	project er	boom/outrigg	1	0	none	unkno	M	27	none	none	none	none	unknown	unknown	equipment operator	1611
Caught in/between equipment	na	na	na	na	no	yes	dump truck	project none	1	0	none	vn	M	26	fluid	hydraulic	altering	none	none	repair	equipment operator	1771	
Caught in/between equipment	no	na	na	na	no	yes	elevator	project none	1	0	none	AM	M	55	none	none	none	none	none	unknown	unknown	elevator	1796
Caught in/between equipment	na	na	na	na	yes	no	fuel/ser vice	project none	1	0	none	unkno	wn	M	20	none	none	none	none	building	repair	equipment mechanic	1611
Caught in/between equipment	na	na	na	na	no	yes	vehicle	project none	1	0	none	vn	M	57	earth	lateral	none	none	none	unknown	unknown	new equipment operator	1611
Caught in/between equipment	na	na	na	na	no	yes	scraper	project none	1	0	none	PM	M	230	none	none	none	none	none	roadway	construction	new equipment operator	1611
Caught in/between equipment	na	na	na	na	yes	no	hi-lo, truck	project none	1	0	none	unkno	M	54	none	none	none	none	unknown	unknown	unknown	unknown	1761
Caught in/between equipment	na	na	na	na	no	yes	lawnmower	project none	1	0	none	PM	M	46	none	none	none	none	none	grounds	unknown	grounds maintenance	1629
Caught In/between equipment	na	na	na	na	no	yes	Flat bed truck	project none	1	0	none	unkno	M	51	hay	lateral	none	none	none	road	unknown	laborer	1623
Caught in/between equipment	na	na	na	na	yes	no	dumptruck	project none	1	0	none	vn	M	18	none	none	none	none	none	unknown	unknown	equipment mechanic	1711
Caught in/between equipment	na	na	na	na	yes	no	crane, flatbed truck	project headache ball	1	0	none	unkno	wn	M	64	none	none	none	none	none	unknown	crane maintenance	1622
Caught in/between equipment	na	na	na	na	no	yes	crane	project pins	1	0	none	unkno	wn	M	40	none	none	none	none	none	unknown	crane maintenance	1799
Caught in/between equipment	na	na	na	na	no	yes	crane	project none	1	0	none	unkno	wn	M	57	steel plate	lateral	none	none	none	unknown	crane operator	1791
Caught in/between equipment	na	na	na	na	yes	no	crane	project none	1	0	none	8.30	AM	M	49	sheet piling/vib. hammer	lateral	timber mats	unknown	unknown	equipment operator	1623	



Caught in/between equipment	na	na	na	no	no	yes	dump truck	project	jack	1	0	none	unkno wn	M	42	none	none	none	none	unknown	equipment mechanic	1623
Caught in/between equipment	na	na	na	no	no	yes	floating work platform	project	none	1	0	none	unkno wn	M	44	none	none	none	waterline for pier	new construction	plumber pipe fitter	1711
Caught in/between equipment	na	na	na	no	no	yes	forklift	project	none	1	0	none	unkno wn	M	41	none	hot water storage tank	hoisting	none	none	laborer	1711
Caught in/between equipment	na	na	na	no	no	yes	dumper truck	project	none	1	0	none	unkno wn	M	51	none	none	none	unknown	equipment mechanic	1611	
Caught in/between equipment	na	na	na	no	no	yes	overhead door	project	none	1	0	none	6.45P M	M	58	none	none	none	building	none	Caught under electrical o/h door	1731
Caught in/between equipment	na	na	na	no	no	yes	boom connector	project	pins	1	0	none	12.45 PM	M	229	none	none	none	unknown	demolition	crane oiler	1796
Caught in/between equipment	no	na	na	no	no	yes	crane milling machine	project	none	1	0	none	2.45 AM	M	40	none	none	none	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	no	no	yes	backhoe	project	none	1	0	ran	unkno wn	M	30	none	none	none	new construction	riding on backhoe	1799	
Caught in/between equipment	na	na	na	yes	no	no	roller	project	none	1	0	none	6.00 PM	F	23	none	none	none	road	new construction	operator	1611
Caught in/between equipment	na	na	na	no	yes	yes	dozer, low boy	project	none	1	0	none	2.00 PM	M	44	none	none	loading ramps	none	equipment operator	1794	
Caught in/between equipment	na	na	na	no	yes	yes	lift	project	none	1	0	none	unkno wn	M	31	none	none	none	bridge	unknown	equipment operator	1611
Caught in/between equipment	no	na	na	no	no	yes	press rolls	project	none	1	0	none	unkno wn	M	38	none	none	none	unknown	temporary support for trailer	equipment mechanic?	1796
Caught in/between equipment	na	na	na	yes	no	no	trailer	project	jack stand	1	0	none	unkno wn	M	22	none	none	none	none	laborer	1799	
Caught in/between equipment	na	na	na	no	no	yes	utility trailer	project	cinder block	1	0	none	unkno wn	M	54	none	none	none	unknown	unknown	mechanic	1799



Caught in/between equipment	na	na	na	na	no	yes	or	roller compact	project	none	1	0	none	unkno wn	M	56	none	none	none	unknown	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	compact or	project	none	1	0	none	unkno wn	M	56	none	none	none	highway	new construction	equipment operator	1611	
Caught in/between equipment	na	na	na	na	yes	no	or	dumptr ck,	project	none	1	0	night	AM	M	31	mid	lateral	none	none	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	yes	no	or	dozer	project	none	1	0	night	AM	M	31	mid	lateral	none	none	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	compact or	project	none	1	0	none	unkno wn	M	31	none	lateral	none	none	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	trailor	project	none	1	0	none	unkno wn	M	30	none	none	none	house	new construction	equipment operator	1521	
Caught in/between equipment	na	na	na	na	no	yes	or	loader	project	none	1	0	none	unkno wn	M	21	none	none	none	none	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	dozer/tr iler	project	none	1	0	none	unkno wn	M	21	none	none	none	none	unknown	equipment operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	tiler	project	none	1	0	none	unkno wn	M	42	none	none	none	none	unknown	crane operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	crane	project	boom	1	0	none	unkno wn	M	42	none	none	none	none	unknown	crane operator	1611	
Caught in/between equipment	na	na	na	na	no	yes	or	base	mount	project	none	1	1	none	3.00 PM	M/M	30,44	piston	hoisting	none	unknown	unknown	lifting material	1796
Caught in/between equipment	na	na	na	na	yes	yes	or	base	mount	project	none	1	1	none	3.00 PM	M/M	30,44	piston	hoisting	none	unknown	unknown	lifting material	1796
Caught in/between equipment	na	na	na	na	no	yes	or	dumptr ck	project	board	1	0	none	unkno wn	M	42	concrete	lateral	none	none	none	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	roller	project	board	1	0	none	unkno wn	M	46	unknown	none	none	none	unknown	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	compact	project	none	1	0	none	unkno wn	M	46	unknown	none	none	none	unknown	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	skid	project	none	1	0	none	unkno wn	M	31	trash	lateral	none	none	unknown	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	steer	project	none	1	0	none	unkno wn	M	31	trash	lateral	none	none	unknown	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	loader	project	none	1	0	none	unkno wn	M	27	none	none	none	none	none	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	dozer/tr iler	project	none	1	0	none	unkno wn	M	40	none	none	none	none	none	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	tractor	project	battery cables	1	0	none	unkno wn	M	52	oil	altering	none	none	unknown	unknown	Manual Mat Handling	1521
Caught in/between equipment	na	na	na	na	no	yes	or	person	project	battery cables	1	0	none	unkno wn	M	52	oil	altering	none	none	unknown	unknown	Manual Mat Handling	1521
Caught in/between equipment	no	na	na	na	yes	yes	or	el/mater	project	none	1	0	none	unkno wn	M	52	oil	altering	none	none	unknown	unknown	Manual Mat Handling	1521



Caught in/between equipment	no	na	na	na	no	yes	elevator	project	none	1	0	none	unkno	M	30	none	none	none	building	repair	elevator repaire	1796		
Caught in/between material	na	na	na	na	no	no	none	none	1	0	none	unkno	M	37	none	concrete, forms	trench/form	none	new construction	concrete worker	new construction	concrete worker	1623	
Caught in/between material	na	na	na	na	yes	no	forktruc	project	pipes	1	0	none	unkno	M	45	electrical panel box (3000 lb)	lateral platform	building	demolition	demolisher	guiding	guiding	1796	
Caught in/between material	na	na	na	na	yes	no	backhoe	project	chain slings	1	0	none	9-20	M	26	pipe	hoisting	excavation system	pipe	unknown	lifting operations	lifting operations	1794	
Caught in/between material	na	na	na	na	yes	no	none	none	come-along	1	0	none	unkno	M	39	none	none	steel cage	unknown	unknown	ironworker?	ironworker?	1622	
Caught in/between material	na	na	na	na	no	yes	crane	project	crowbars	1	1	none	unkno	M	47.18	concrete	lowering	g/hoist/ri	none	unknown	new construction	unknown laborers?	unknown laborers?	1771
Caught in/between material	na	na	na	na	yes	no	crane	project	equipm	1	0	none	unkno	M	44	concrete	none	none	concrete tank	unknown	spotters	spotters	1629	
Caught in/between material	na	na	na	na	yes	no	no	no	project	1	0	none	unkno	M	16	steel I-beam; lateral	none	none	house	Moving	unknown	forklift operator	1795	
Caught in/between material	na	na	na	na	yes	no	truck	project	trailer	1	0	none	unkno	F	42	electrical switchgear	hoisting	none	none	unknown	guiding	forklift operator	guiding	1799
Caught in/between material	na	na	na	na	yes	no	forklift	project	none	1	0	none	9-15	M	51	wheel axles	lateral jacks	mobile	new	construction trades	construction	construction	1799	
Caught in/between material	na	na	na	na	yes	yes	none	none	jacks	1	0	none	3-00	M	50	metal	altering	none	water tower	demolition	cutter	cutter	1795	
Caught in/between material	na	na	na	na	no	yes	none	none	torch	1	0	none	unkno	M	60	boiler	none	none	building	unknown	boiler	boiler	1711	
Caught in/between material	na	na	na	na	no	yes	none	none	none	1	0	none	jacks/support	8-30	modular	hoisting	none	modular	new home	placing home	placing home	new home	1799	
Cave-in (excavation/tunneling)	na	na	na	na	no	no	none	none	blocks	1	0	none	unkno	M	24	home	none	none	new construction	new construction	new construction	new construction	1629	



Cave-in (excavation/tunneling)	na	na	8'	unkno	wn	no	pile driver	project	none	1	0	none	1.45 PM	M	35	earth	none	none	none	unknown	unknown	1622	
Cave-in (excavation/tunneling)	na	na	35-40'	yes	no	no	tractor loader	project	none	2	0	none	3.50 PM	M	44.53	dirt	lateral pit	excavation	unknown	unknown	equipment operator	1794	
Cave-in (excavation/tunneling)	na	na	10'	no	no	no	none	none	1	0	none	unkno	wn	M	25	none	none	excavation/t trench	unknown	unknown	unknown	1623	
Cave-in (excavation/tunneling)	na	na	unk	no	no	no	none	none	1	0	none	unkno	wn	M	26	none	none	excavation	none	unknown	unknown	1622	
Cave-in (other)	na	na	20'	no	no	no	caisson drill	project	none	1	0	none	3.24 PM	M	61	soil	alterng holes	caisson	none	new construction	equipment operator	1794	
Cave-in (trench)	na	na	10'	yes	no	no	none	none	1	0	none	3.30 PM	M	44	earth	none	trench	sewer line	unknown	plumber/filter	plumber/filter	1623	
Cave-in (trench)	na	na	11'	remov	no	yes	none	none	1	0	none	8.40 AM	M	41	none	none	trench	unknown	unknown	plumber/filter	plumber/filter	1623	
Cave-in (trench)	na	na	8'	no	no	no	none	none	1	0	none	6.30 AM	M	53	none	none	trench	steam pipe	demolition	welder/cutter	1711		
Cave-in (trench)	na	na	10'	per	yes	no	none	shovel	1	0	none	unkno	wn	M	52	earth	none	trench	sanitary sewer system	new	construction	pipelayer	1623
Cave-in (trench)	na	na	8'	yes	no	yes	backhoe	project	none	1	0	none	1.29 PM	M	28	dirt	lateral trench	wall	foundation	new construction	concrete	1771	
Cave-in (trench)	na	na	6'	no	no	no	none	none	1	0	none	unkno	wn	M	25	unknown	none	trench	unknown	unknown	plumber/filter	1794	
Cave-in (trench)	na	na	9 fe	no	no	no	none	none	1	0	none	unkno	wn	M	29	earth	none	trench	unknown	new	construction	plumber/filter	1623
Cave-in (trench)	na	na	7	no	no	no	none	none	1	0	none	unkno	wn	M	32	pvc pipe	lateral trench	drain tile line	new	construction	utility	1629	
Cave-in (trench)	na	na	7	no	no	no	none	none	1	0	none	unkno	wn	M	32	pvc pipe	lateral trench	drain tile line	new	construction	plumber/filter	1711	



Cave-in (trench)	na	na	10'	no	no	none	none	1	0	none	5.30	pipe system	unknown	plumber/pipe fitter	1711	
Cave-in (trench)	na	na	13	no	no	none	none	1	0	none	11.30	M 26	none	trench		
Cave-in (trench)	na	na	feet: no	no	no	none	none	1	0	none	M 35	none	trench			
Cave-in (trench)	na	na	12'	no	yes	none	none	1	1	none	M.M. 52.21	clay pipe	trench	unknown	plumber/pipe fitter	
Cave-in (trench)	na	na	8-12'	no	yes	no	backhoe project	none	1	0	none	unkno wn	M 34	none	septic system	1711
Cave-in (trench)	na	na	9.5'	no	yes	no	backhoe project	surveyor rod	1	0	none	unkno wn	M 43	none	storm water	
Cave-in (trench)	na	na	11'	no	no	none	none	1	0	none	unkno wn	M 38	earth	drain line	grade checker 1711	
Cave-in (trench)	na	na	10-11'	no	no	none	none	1	0	none	unkno wn	M 29	earth	storm sewer	new construction	
Cave-in (trench)	na	na	14'	no	yes	no	none	2	0	none	1.30	M.M. 35.25; pipe, earth	trench	sewer line repair	laborer	
Cave-in (trench)	na	na	8 ft et	no	yes	no	backhoe project	none	1	0	none	unkno wn	M 32	dirt	sewer system	unknown
Cave-in (trench)	na	na	5.5'	no	no	none	none	1	0	none	unkno wn	M 49	pipe	pipe system	plumber/pipe fitter	
Cave-in (trench)	na	na	yes-14'	partial	yes	no	backhoe project	none	1	0	none	3.30	M 26	pipe	sewer system	1623
Cave-in (trench)	na	no	12'	no	yes	no	excavat or	project none	2	0	none	unkno wn	M.M. 54.7	pipe	house	repair
Cave-in (trench)	na	na	7	no	no	no	none	1	0	none	unkno wn	M 28	earth	trench	unknown	
Cave-in (trench)	na	na	10-12'	no	no	no	none	1	0	none	11.00	M 49	pipe	altering trench	unknown	



Cave-in (trench)	na	na	10-12'	no	yes	no	trackhoe	project	none	1	1	none	9.30 AM	MM.36.26	soil	altering	sewer trench	sewer system	unknown	unknown	1711		
Cave-in (trench)	na	na	7	no	no	no	backhoe	project	none	1	0	none	unkno	M	40	none	trench	sewer system	repair	laborer	1623		
Cave-in (trench)	na	na	5.5'	no	no	none	none	none	1	0	none	unkno	wn	M	23	sewer pipe	lateral	trench	sewer system	unknown	plumber/pipe filter	1623	
Cave-in (trench)	na	na	unk	no	no	none	none	none	1	0	none	10.00	AM	M	40	pipe	lateral	trench	sewer system	new construction	plumber/pipe filter	1623	
Cave-in (trench)	na	na	8-12'	no	no	none	none	none	1	0	none	unkno	wn	M	56	pipe	lateral	trench	residential new house	construction	plumber/pipe filter	1623	
Cave-in (trench)	na	na	12'	wn	yes	yes	none	none	1	1	none	unkno	wn	M	29.30	earth	none	trench	none	unknown	unknown	1623	
Cave-in (trench)	na	na	10'	no	no	none	none	none	1	0	none	4.00	PM	M	37	none	none	trench	pipe system	new construction	plumber/pipe filter	1521	
Cave-in (trench)	na	na	10'	no	no	no	trackhoe	project	none	1	0	none	unkno	wn	M	30	none	none	trench	water/sewer line	new construction	equipment operator	1794
Cave-in (trench)	na	na	17	no	no	none	none	none	1	0	none	unkno	wn	M	35	earth	none	trench	sewer system	unknown	unknown	1623	
Cave-in (trench)	na	na	13'	use	no	yes	none	none	1	0	none	11.45	AM	M	44	pipe	lateral	shield, trench	sewer system	unknown	plumber/pipe filter	1711	
Cave-in (trench)	na	na	unk	no	wn	no	no	dozer	project	none	1	0	none	unkno	wn	M	29	dirt	lateral	trench	farm pond repair	1794	
Cave-in (trench)	na	na	14'	no	no	none	none	none	1	0	none	unkno	wn	M	36	none	none	trench	drainage system	new construction	plumber/pipe filter	1623	
Cave-in (trench)	na	na	10'	no	yes	no	none	none	2	1	none	7.00	PM	M	19.20	pipe	lateral	trench	sewer system	new construction	plumber/pipe filter	1623	
Cave-in (trench)	na	na	12'	no	no	no	none	none	1	0	none	unkno	wn	M	45	unknown	none	trench	unknown	unknown	plumber/pipe filter	1794	



Cave-in (trench)	na	na	6.5' no yes-	no	no	none	shovel	1	0	none	3.30	PM	M	47	dirt	lateral	trench	storm drain system	new construction	plumber/pipe fitter	1794				
Cave-in (trench)	na	na	22' per impro	yes	no	none	none	1	0	none	unkno	wn	M	28	large hose	hoisting	trench	pipe	new construction	new	laborer	1794			
Cave-in (trench)	na	na	9- 10' per use	no	yes	none	none	1	0	none	unkno	wn	M	54	pipe	lateral	trench	sewer system	renovation	plumber/pipe fitter	1623				
Cave-in (trench)	na	na	na	na	yes	barge	project	winch	2	1	0	none	10.30	AM	M	43	earth	none	trench	none	unknown	plumber/pipe fitter?	1542		
Drowning	na	na	na	na	yes	barge	project	winch	2	1	0	none	unkno	M,M	24.30	anchor and chain	hoisting	none	none	repairs	unknown	removing debris from culvert	1629		
Drowning	na	na	na	na	no	yes	skiff	boat, barge	project	none	1	0	none	unkno	11.30	AM	M	33	none	none	culvert	repair	unknown	1611	
Drowning	na	na	na	na	no	yes	skiff	boat, barge	project	none	1	0	none	unkno	4.00	PM	M	45	dirt	lateral	berm	lake	new construction	equipment operator	1629
Drowning	na	na	na	na	no	yes	dozer	project	none	1	0	none	unkno	wn	M	38	dirt	lateral	berm	unknown	unknown	unknown	1629		
Drowning	na	na	na	na	no	yes	dumptr	project	none	1	0	none	unkno	wn	M	41	vegetation	altering	none	drainage canal	unknown	ground maintenance	1629		
Drowning	na	na	na	na	no	yes	dozer	project	none	1	0	none	unkno	wn	M	29	none	none	none	none	welders	1629			
Drowning	na	na	na	na	no	no	none	lawnmover	1	0	none	unkno	wn	M	41	vegetation	altering	none	bridge	repair	equipment operator	1622			
Drowning	na	na	na	na	yes	no	boat	welder	1	0	high	unkno	wn	M	29	none	none	none	none	lagoon	pumping out lagoon	1542			
Drowning	na	na	na	na	no	yes	dozer	project	none	1	0	none	unkno	wn	M	40	riprap	lateral	causeway	bridge	repair	swimming on lunch break	1799		



Drowning	no	yes	na	na	no	turbines	project	air line	1	0	none	wn	M	27	none	none	none	hydroelect	unknown	diver	1799			
Drowning	na	yes	na	no	yes	none	none	rubber bladders	1	0	none	AM	M	48	none	none	drain system	new sewer	new	construction	1794			
Drowning	na	na	na	na	no	yes	dozer	project	none	1	0	none	PM	M	32	rock	lateral ice	jetty	construction	operator	1611			
Electrocution (building power)	no	na	na	no	no	yes	none	none	none	1	0	none	wn	M	45	none	none	transformer	unknown	electrical	1731			
Electrocution (building power)	no	na	na	no	no	yes	none	none	none	1	0	none	wn	M	20	light fixture	lateral	none	building	unknown	electrical	1731		
Electrocution (building power)	no	na	na	no	no	yes	none	none	drill	1	0	none	wn	M	33	sheet metal, wood	altering	none	house	new construction	mechanic	1711		
Electrocution (building power)	no	na	na	no	no	yes	none	none	drill/router attachment	1	0	none	wn	M	30	wood	altering	none	house	new	hvac	mechanic	1711	
Electrocution (building power)	yes-impro per	na	na	no	no	yes	none	none	none	wood 2X4	1	0	none	wn	M	25	breakers	altering	none	house	repair	electrical	1731	
Electrocution (building power)	no	na	na	no	no	yes	none	none	none	wire cutters	1	0	none	wn	M	23	none	none	conveyor system,	stepladder	hospital	repair	1731	
Electrocution (building power)	no	na	na	no	yes	none	none	none	wire stripper	1	0	none	wn	M	35	fixture	ballast/light	none	house	new	hvac	mechanic	1711	
Electrocution (building power)	no	na	na	no	no	yes	none	none	none	metal bar and plate, level	1	1	none	wn	M	20	none	none	building	unknown	electrician	1799		
Electrocution (building power)	no	na	na	no	no	yes	none	none	8 ton jack	project plate	none	none	wn	M	25.32	none	aluminum straps, wood	altering	none	house	repair	leveling crew	1799	
Electrocution (building power)	no	na	na	no	yes	yes	none	none	none	drill	2	0	none	PM	M	29.45	joist	none	house	new	hvac	mechanics	1711	
Electrocution (building power)	no	na	na	no	no	yes	none	none	none	none	1	0	none	PM	M	18	fence post	lateral	none	building	fence	construction	installer	1799



Electrocution (building power)	yes	improper	na	na	no	yes	none	none	none	1	0	none	unkno	M	23	cable	lateral	none	building	repair	asbestos worker	1799	
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	Painting equipment	1	0	none	unkno	M	41	paint	none	ladder	building	unknown	painter	1721
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	2.00P	M	44	wiring	altering	none	building	new	construction	electrical	1731			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	32	light fixture	altering	ladder	building	unknown	electrical	electrical	1731			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	wireway covers	M	39	electrical circuit	altering	none	automobil	renovation	electrical	electrical	1731			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	35	wall switch	altering	none	building	renovation	carpenter	carpenter	1751			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	38	sheet metal screws, wood	altering	none	building	repair	electrical	electrical	1542			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	2.30P	M	29	wire	lateral	none	house	new	construction	mechanic	1711			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	43	paint	altering	none	building	repair	elevator	repainter	1796			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	55	paint brush	1	0	none	unkno	M	72	none	light plant	1731	
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	72	none	none	none	light plant	repair	electrical	electrical	1731			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	34	wire	none	none	building	repair	asbestos worker	asbestos worker	1799			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	25	Overhead light feed wires	none	none	building	electrical service	remodel	electrical	1731			
Electrocution (building power)	no	na	na	na	no	yes	none	none	none	unkno	M	60	side cutters	1	0	none	altering	none	building	repair	electrical	1731	



Electrocution (faulty const tool/wiring)	na	na	na	na	no	no	none	none	unknown	1	0	water and	unkno wn	M	32	none	none	building	unknown	building	unknown	carpenter	1742	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	floor sanding machine	1	0	humidity	unkno y	M	22	wood	altering	none	building	unknown	building	sanding floor	1752	
Electrocution (faulty const tool/wiring)	na	na	na	na	no	yes	none	none	drop light cord	1	0	none	PM	M	18	none	none	house	construction	new	new	hvac	1711	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	portable light	1	0	none	unkno wn	M	40	none	none	house	construction	new	new	construction mechanic	1711	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	electrical snake	1	0	none	unkno wn	M	27	none	none	house	construction	new	new	plumber/pipe fitter	1711	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	no	none	none	water pump	1	0	none	unkno wn	M	22	none	none	house	construction	new	new	plumber/pipe fitter	1711	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	welder	1	0	none	4.15 water	M	29	none	none	house	construction	new	new	draining swimming pool	1521	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	scissor lift	project	1	0	none	2.00 PM	M	23	none	none	house	construction	new	new	draining swimming pool	1711
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	no	none	ribbler	1	0	none	4.15 water	M	22	none	none	house	construction	new	new	draining swimming pool	1521	
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	handrail	1	0	none	10.00 AM	M	19	screws	altering	ladder	building	unknown	building	unknown	welder	1799
Electrocution (faulty const tool/wiring)	no	na	na	na	no	yes	none	none	electrical handrail	1	0	none	8.30 AM	M	30	none	none	house	construction	new	new	draining swimming pool	1711	
Electrocution (faulty existing wiring)	no	na	na	na	no	no	none	none	ventilation fan	1	0	none	unkno wn	M	36	pipe	lateral	none	house	construction	new	new	draining swimming pool	1711
Electrocution (faulty existing wiring)	na	na	na	na	no	no	none	none	ventilation fan	1	0	none	unkno wn	M	40	none	none	house	construction	new	new	draining swimming pool	1711	
Electrocution (faulty existing wiring)	no	na	na	na	no	yes	none	none	ventilation fan	1	0	none	unkno wn	M	37	conduit	none	house	construction	new	new	draining swimming pool	1711	
Electrocution (faulty existing wiring)	no	na	na	na	no	no	yes	none	ventilation fan	1	0	none	unkno wn	M	32	sheetrock	lateral	scaffold	building	construction	new	new	draining swimming pool	1711



Electrocution (faulty existing wiring)	na	na	na	no	no	none	saw	1	0	none	wn	unkno	M	31	none	none	none	house	addition	carpenter	1542			
Electrocution (faulty existing wiring)	no	na	na	no	yes	none	none	pipe wrench	1	0	none	wn	unkno	M	17	water line	altering	none	building	repair	plumber/pipe fitter	1799		
Electrocution (faulty existing wiring)	no	yes	na	no	yes	none	none	none	1	0	none	wn	unkno	M	29	none	none	none	building	repair	plumber/pipe fitter	1711		
Electrocution (faulty existing wiring)	no	na	na	no	yes	none	fan	1	0	none	wn	unkno	M	31	none	none	none	unknown	unknown	electrical	1731			
Electrocution (faulty existing wiring)	no	na	na	no	yes	none	none	none	1	0	none	wn	unkno	M	20	none	none	none	bank	unknown	electrical	1731		
Electrocution (faulty existing wiring)	no	na	na	no	yes	none	none	water heater	1	0	none	wn	unkno	M	17	pipe	lateral	none	new	construction	plumber/pipe fitter	1711		
Electrocution (faulty existing wiring)	no	na	na	no	yes	none	none	ohmmeter	1	0	none	wn	unkno	M	39	none	none	none	switchgear	unknown	electrical	1731		
Electrocution (other)	yes-improper	na	na	yes	no	yes	none	none	electrical water heater	1	0	none	wn	unkno	M	64	none	none	none	unknown	repair	electrical	1731	
Electrocution (other)	no	na	na	no	no	yes	none	none	electrical equipment	1	0	none	wn	unkno	M	30	none	none	none	substation	repair	electrical	1731	
Electrocution (other)	no	na	na	yes	yes	none	none	none	none	1	0	none	wn	unkno	M	30	lightbulbs	altering	none	marquee sign	repair	electrical	1731	
Electrocution (other)	no	na	na	no	yes	none	none	none	none	1	0	none	wn	9.00	AM	32	metal conduit	lateral	none	transformer	new construction	electrical	1731	
Electrocution (other)	no	na	na	no	no	yes	none	none	none	1	0	none	wn	unkno	M	53,48	unknown	unknown	power generating station	unknown	new	welder/cutter	1711	
Electrocution (other)	no	na	na	yes	unknown	none	unknown	none	1	2	none	wn	unkno	M	57	unknown	none	none	metal duct	unknown	new	construction	plumber/pipe fitter	1711
Electrocution (other)	na	na	na	no	yes	none	none	arc welder	1	0	none	PM	1:30	wn	55	pipe	none	none	house	addition	new	construction	plumber/pipe fitter	1711



Electrocution (other)	no	na	na	no	yes	none	none	1	0	none	unkno	wn	M	25	none	none	none	runway lighting system	unknown	electrical	1731	
Electrocution (other)	no	na	na	no	yes	none	none	voltage meter	1	0	none	PM	M	29	none	none	4160 volt breaker	maint/repair	electrical	1731		
Electrocution (other)	no	na	na	no	no	unknown	none	none	1	0	none	unkno	wn	M	32	transformer	none	unknown	unknown	electrician	1623	
Electrocution (power lines)	no	na	na	no	yes	none	none	none	1	0	none	10-04	AM	M	36	none	none	utility pole	unknown	electrical	1731	
Electrocution (power lines)	no	na	na	yes	yes	none	none	none	1	0	none	unkno	wn	M	29	none	none	high voltage system	unknown	electrical	1623	
Electrocution (power lines)	no	na	na	yes	yes	none	none	none	1	0	none	unkno	wn	M	24	guy wires	alterng	none	high voltage system	unknown	electrician	1623
Electrocution (power lines)	no	na	na	no	yes	none	none	none	1	0	none	unkno	wn	M	29	conduit	none	none	new building	construction	electrical	1731
Electrocution (power lines)	no	na	na	no	yes	none	none	none	1	0	none	5.43	PM	M	34	poles	hosting:none	telephone system	new construction	utility construction	1623	
Electrocution (power lines)	no	na	na	no	yes	none	none	none	1	0	none	12-30	PM	M	35	wiring	lateral	none	building	unknown	electrical	1731
Electrocution (power lines)	no	na	na	yes	no	excavat	or	project	none	1	0	none	unkno	wn	M	35	pipe	lateral	none	unknown	spotter	1623
Electrocution (power lines)	no	na	na	yes	yes	none	none	none	1	2	none	1.00	MM	M	37,2	gutter pipe	hosting:ladder	scaffold, house	unknown	gutter installation	1761	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	0	none	9:00	AM	M	32	power line	hosting:none	high voltage system	repair	electrician	1623	
Electrocution (power lines)	no	na	na	no	yes	none	none	none	1	0	none	unkno	wn	M	23	none	none	unknown	house	repair	roofer/sheet metal worker	1521
Electrocution (power lines)	no	na	na	no	yes	none	none	none	1	0	wind	unkno	wn	M	46	transformer	lateral	none	telephone system	repair	electrician	1623



Electrocution (power lines)	no	na	na	no	yes	no	crane	project	outriggers and slung chain	1	0	none	wn	43	none	none	none	unknown	unknown	guiding equipment	1799		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	1	none	wn	M	24.27	ladder	hosting	ladder	building	unknown	taking ladder	1761		
Electrocution (power lines)	no	na	na	yes	yes	yes	none	none	2	0	none	wn	M	28.24	poles	wood light	hosting	none	new	down-roofing	1731		
Electrocution (power lines)	no	na	na	yes	yes	yes	none	none	1	0	none	wn	M	3.45	PM	unkno	M	24	none	electrical utility	1741		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	0	none	wn	M	41	none	unkno	M	50	none	construction	1731		
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	wn	M	3.45	PM	unkno	M	24	none	electrocuted and then fell	27		
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	wn	M	41	none	unkno	M	50	none	construction	1731		
Electrocution (power lines)	no	na	na	yes	yes	no	drill	project	shovel	1	0	none	wn	M	50	none	unkno	M	50	none	power poles	1799	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	crescent wrench	1	0	none	wn	M	28	none	unkno	M	28	none	new	1731	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	0	none	wn	M	49	none	wet ground	unkno	M	49	none	construction	1731	
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	wn	M	38	power lines	altering	none	unkno	unknown	electrical utility	1623		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	0	none	wn	M	38	power lines	altering	none	unkno	unknown	electrical utility	1623		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	0	none	wn	M	43	metal	lateral	scalfold	building	unknown	placing	1751		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	1	0	none	wn	M	36	cables	high voltage	altering	none	unkno	unknown	electrical utility	1731	
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	wn	M	27	none	unkno	M	27	none	power poles	1731		
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	wn	M	2.00	PM	unkno	M	30.28	scalfold	tower lateral	none	power line	1741
Electrocution (power lines)	no	na	na	yes	yes	no	forklift	project	truck	1	1	none	wn	M	2.7	none	unkno	M	27	pole	power line	1731	
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	wn	M	8	steel rod	project	8' steel rod	1	0	steading load for forklift	1731		



Electrocution (power lines)	no	na	na	no	yes	none	none	wire cutters	1	0	none	unkno	wn	M	26	none	none	none	house	new construction	electrical	1731			
Electrocution (power lines)	no	na	na	no	no	yes	none	none	1	0	none	unkno	wn	M	34	none	none	none	power lines	repair	electrical	1731			
Electrocution (power lines)	no	na	na	yes	no	none	none	backhoe project	none	1	0	none	2.00	PM	M	30	sign	lateral	none	unknown	guiding equipment	guiding equipment	1799		
Electrocution (power lines)	no	na	na	no	yes	none	none	scissor lift	project	awl	1	0	none	unkno	wn	M	39	wiring	lateral	none	department store	new construction	electrical	1731	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	ditch witch	project	none	1	0	none	7.10	AM	M	24	earth	lateral	trench	unknown	unknown	equipment operator	1623	
Electrocution (power lines)	no	na	na	no	no	yes	none	none	none	1	1	none	unkno	wn	M	55.33	ladder	hoisting ladder	house	unknown	glazier	1521			
Electrocution (power lines)	no	na	na	yes	yes	none	none	bucket truck	project	none	1	0	none	unkno	wn	M	34	conductor	none	none	power system	new construction	electrician	1623	
Electrocution (power lines)	no	na	na	no	no	yes	none	boom bucket	project	lumper cables	1	0	none	unkno	wn	M	31	none	none	none	power system	repair	electrician	1623	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	1	none	unkno	wn	M	56	ladder	hoisting ladder	house	unknown	glazier	1521			
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	47	guy wires	lateral	none	high voltage system	utility pole	roofers	1761		
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	27	stinger wire	altering	none	unknown	unknown	electrician	1623		
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	26	utility vault	hoisting	none	unknown	unknown	spotter	1623		
Electrocution (power lines)	no	na	na	no	no	yes	yes	bucket truck	project	none	1	0	none	8.00	AM	M	27	stinger wire	altering	none	unknown	unknown	spotter	1623	
Electrocution (power lines)	na	na	na	na	yes	no	none	crane	project	tag line	1	0	none	unkno	wn	M	26	concrete	utility vault	hoisting	none	unknown	unknown	spotter	1623
Electrocution (power lines)	no	na	na	no	yes	yes	yes	aerial lift	project	none	1	0	none	unkno	wn	M	29	none	none	none	power system	repair	electrician	1731	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	bucket truck	project	none	1	0	none	unkno	wn	M	57	electrical lines	lateral	none	unknown	unknown	spotter	1623	



Electrocution (power lines)	yes	na	na	no	yes	yes	manlift	project	none	1	0	none	unkno	wn	M	38	ground line	none	none	high voltage system	unknown	electrician	1623		
Electrocution (power lines)	no	na	na	no	yes	yes	none	power washer	1	0	none	unkno	wn	M	31	none	none	scaffold	unknown	powerwasher	1721				
Electrocution (power lines)	no	na	na	yes	no	yes	crane	project	digger auger	1	0	none	unkno	wn	M	28	none	none	none	none	unknown	spotter	1623		
Electrocution (power lines)	no	na	na	na	yes	no	none	none	none	1	0	none	unkno	wn	M	52	aluminum siding/fascia/lateral	none	none	garage utility pole system	new construction	roofer	1521		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	unkno	wn	M	27	power pole	altering	none	none	demolition	unknown	1623		
Electrocution (power lines)	no	na	na	no	yes	no	none	none	none	1	0	none	unkno	wn	M	35	none	none	none	high voltage system	unknown	electrician	1623		
Electrocution (power lines)	no	na	na	yes	no	yes	none	none	none	1	0	none	9:10	AM	M	20	steel pipe	hoisting	none	none	none	unknown	laborer	1629	
Electrocution (power lines)	no	na	na	yes	no	yes	crane	project	none	1	0	none	unkno	wn	M	44	power line	altering	none	high voltage system	repair	electrician	1623		
Electrocution (power lines)	no	na	na	no	yes	yes	manlift	project	none	1	0	none	unkno	wn	M	30	none	none	none	none	demolition	blaster	1629		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	blasting cap and lead wires	1	0	none	unkno	wn	M	32	power lines	altering	none	high voltage system	unknown	electrician	1623		
Electrocution (power lines)	no	na	na	yes	no	yes	none	none	none	1	0	none	unkno	wn	M	32	power lines	altering	none	high voltage system	water main system	new construction	spotter	1623	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	unkno	wn	M	38	pipe	hoisting	trench	none	none	power pole	repair	electrician	1623
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	backhoe	project	none	unkno	wn	M	31	switch	none	none	none	none	unknown	spotter	1623		
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	aerial lift	project	none	unkno	wn	M	25	communication tower	hoisting	none	none	none	unknown	spotter	1623		
Electrocution (power lines)	no	na	na	yes	no	yes	backhoe	project	none	1	1	none	unkno	wn	M	25?	pipe	hoisting	none	none	unknown	spotter	1623		
Electrocution (power lines)	no	na	na	yes	no	yes	none	none	none	1	0	none	unkno	wn	M	25	ion tower	hoisting	none	none	unknown	spotter	1623		



Electrocution (power lines)	no	na	na	yes	yes	yes	yes	none	none	1	0	none	AM	M	38	rubber blanket	none	none	high voltage system	repair	electrician	1623						
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	29	wires	altering	none	power poles	repair	electrical-utility construct	1731					
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	37	PVC pipe containing circuit	altering	excavation/ trench	excavation/	laborer	1623						
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	37	M/M 23.35 wire	altering	scaffold	building	new construction	masons	1741					
Electrocution (power lines)	no	na	na	yes	yes	yes	yes	none	none	1	1	none	unkno	wn	M	26	none	housing	none	none	new construction	spotter	1521					
Electrocution (power lines)	no	na	na	yes	yes	yes	yes	none	none	1	0	none	unkno	wn	M	21	none	none	none	none	unknown	unknown	1623					
Electrocution (power lines)	no	na	na	no	no	no	no	no	no	1	0	none	PM	M	21	none	12.00	power lines	altering	none	high voltage system	repair	electrician	1623				
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	unkno	wn	M	28	power lines	altering	none	none	power system	unknown	utility construction	1623				
Electrocution (power lines)	no	na	na	no	no	no	no	no	no	1	0	none	unkno	wn	M	44	utility pole	lateral	none	power pole	repair	electrician	1623					
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	climbing belt	1	0	none	unkno	wn	M	40	power line	hoisting	none	storm sewer system	new construction	operator	1623	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	fire extinguisher	1	0	none	unkno	wn	M	24	earth	lateral	trench	transformer	repair	electrician	1623	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	none	none	1	0	none	dumptruck	project	none	unkno	wn	M	32	none	none	none	transmiss	on tower	unknown	unknown	1623	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	yes	yes	1	0	none	bucket truck	project	none	unkno	wn	M	20	none	none	none	transmiss	on tower	unknown	unknown	1623	
Electrocution (power lines)	no	na	na	no	yes	yes	yes	yes	yes	1	0	none	handline	1	0	none	unkno	M/M 30.37	wn	M	24	scaffold	lateral	scaffold	unknown	unknown	unknown-moving scaffold	1742
Electrocution (power lines)	no	na	na	no	yes	yes	yes	yes	yes	1	2	none	truck with boom	project	kelly bar	unkno	wn	10.30	AM	M	22	none	none	none	utility system	unknown	electrician	1623



Electrocution (power lines)	no	na	na	na	no	yes	none	none	none	1	0	night	2.00	residential	house	repair	electrician	1623	
Electrocution (power lines)	no	na	na	na	yes	no	excavat or/track	hoe	project	none	1	0	condut	AM	M	35	tree	hosting	none
Electrocution (power lines)	no	na	na	na	yes	yes	excavat or/track	hoe	project	none	unkno	wn	M	34	ductile pipe	lateral	none	unknown	spotter
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	1	0	high	voltage	unknown	unknown	high voltage	system	electruman	1623
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	line	spring	M	33	none	none	system
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	gaffs,	gaffs,	M	30	none	none	power
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	positioning	positioning	M	30	none	none	pole
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	hammer,	hammer,	M	38	bolt, guy	none	power
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	screw	driver	M	37	wire	none	system
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	project	project	M	30	pole	none	telephone
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	aerial	lift	M	37	none	none	telephone
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	project	project	M	30	pole	none	repair
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	hoisting	none	repai
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	spotter
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	1623
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	1799
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	telephone
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	repai
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	spotter
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	1623
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	1731
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	electrical
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	unknown-
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	roofer?
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	1761
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	new
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	construction
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	roofer
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	1542
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	30	none	none	operator
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	23	dirt	none	operator
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	26	none	none	1611
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	23	none	none	equipment
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	26	none	none	operator
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	23	none	none	1771
Electrocution (power lines)	yes	na	na	na	yes	yes	none	none	none	unkno	1	0	none	none	M	45	protective	tags	unknown but
Electrocution (power lines)	yes	na	na	na	yes	yes	none	none	none	unkno	1	0	forklift	project	M	45	none	none	likely a steel
Electrocution (power lines)	yes	na	na	na	yes	yes	none	none	none	unkno	1	0	mobile	seafold	M	23	none	none	worker
Electrocution (power lines)	yes	na	na	na	yes	yes	none	none	none	unkno	1	0	forklift	project	M	45	none	none	1791
Electrocution (power lines)	yes	na	na	na	yes	yes	none	none	none	unkno	1	0	forklift	project	M	45	none	none	electrician
Electrocution (power lines)	yes	na	na	na	yes	yes	none	none	none	unkno	1	0	forklift	project	M	45	none	none	1629



Electrocution (power lines)	no	na	na	na	no	yes	none	none	none	1	0	none	unkn	M	20	ladder	lateral	none	building	unknown	painter	1721		
Electrocution (power lines)	no	na	na	na	yes	yes	none	none	none	1	0	none	unkno	wn	M	22	ladder	lateral	none	house	unknown	unknown-painting ktr	1721	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	unkno	wn	M	23	ladder	lateral	none	unknown	unknown	painter	1721	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	unkno	wn	M	45	wire cable	lateral	none	none	unknown	unknown	1761	
Electrocution (power lines)	no	na	na	no	yes	no	crane	project	none	1	0	none	6.35	PM	M	20.23	ladder	lateral	none	building	unknown	painter	1721	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	1	none	unkno	wn	M	31	ladder	lateral	none	unknown	unknown	unknown	1721	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	1.15	PM	M.M	6	none	none	none	unknown	unknown	equipment mechanics	1611	
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	1	none	3.30	PM	M	52	pipe	hoisting	none	none	none	spotters	1542	
Electrocution (power lines)	no	na	na	yes	no	crane	project	none	none	1	0	none	unkno	wn	M	32	traffic controls	lateral	none	highway	new construction	signalman	1611	
Electrocution (power lines)	no	na	na	yes	yes	yes	crane	project	none	1	0	none	unkno	wn	M	50	beams	hoisting	none	unknown	new construction	spotter	1611	
Electrocution (power lines)	no	na	na	yes	yes	yes	crane	project	none	1	0	none	M.M	33.25	M	31.2	steel well	hoisting	none	well	unknown	new	drillers	1799
Electrocution (power lines)	no	na	na	no	yes	yes	none	project	none	1	3	water	unkno	wn	M	1	pipe	hoisting	none	none	new	construction	laborer	1771
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	unkno	wn	M	24	none	none	trench	none	new	post office	flag pole	1799
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	2	0	none	unkno	wn	M.F	25.20	flag pole	hoisting	none	post office	construction installers	flag pole	1799	
Electrocution (power lines)	no	na	na	no	yes	yes	drill rig	project	none	1	0	none	unkno	wn	M	31	none	none	none	unknown	unknown	equipment operator-driller	1799	



Electrocution (power lines)	no	na	na	no	yes	yes	crane	project	none	2	0	none	AM	10.00	M.M	19.27	metal roof	hosting	none	unknown	unknown	equip operator, unknown
Electrocution (power lines)	no	na	na	no	yes	no	drilling	project	none	1	0	none	wn	4.15	M	24	none	none	none	unknown	unknown	driller
Electrocution (power lines)	no	na	na	no	no	no	none	none	none	1	0	none	PM	4.00	M	22	none	none	none	irrigation line	repair	plumber/pipes fitter
Electrocution (power lines)	no	na	na	no	yes	no	drilling	project	none	1	0	none	PM	4.00	M	20	earth	altering	none	storm drainage system	new construction	driller
Electrocution (power lines)	no	na	na	no	yes	no	conveyor boom truck	project	none	1	0	none	wn	unkno	M	39	none	none	none	unknown	unknown	unknown
Electrocution (power lines)	no	na	na	no	yes	yes	overhead crane	project	none	1	0	none	wn	unkno	M	26	none	none	none	unknown	unknown	painter
Electrocution (power lines)	no	na	na	no	yes	yes	crane	project	none	1	1	none	wn	unkno	M.M	16.15	none	none	none	unknown	unknown	spotter, equipment operator
Electrocution (power lines)	no	na	na	no	yes	yes	crane	project	slings	1	2	none	wn	unkno	M.M	29.35	spreader bar	lateral	none	modular home	new construction	guiding crane and spreader bar
Electrocution (power lines)	no	na	na	no	yes	yes	crane	project	none	2	0	none	wn	unkno	M.M	47.29	scaffold	lateral	seafold	building	unknown	steel workers moving scaffold
Electrocution (power lines)	no	na	na	no	yes	yes	boom crane	project	none	1	0	none	PM	2.30	M	42	power poles	hosting	none	none	none	electrical level detection system
Electrocution (power lines)	no	na	na	no	yes	no	none	none	none	1	0	none	wn	unkno	M	33	wire rope	lateral	none	tank	unknown	electrical level detection system
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	wn	unkno	M	37	metal	lateral	none	unknown	unknown	metal worker
Electrocution (power lines)	no	na	na	no	yes	yes	none	none	none	1	0	none	wn	unkno	M	41	siding	lateral	seafold	house	unknown	roofer
Electrocution (power lines)	no	na	na	no	yes	yes	boom truck crane	project	none	1	0	none	wn	unkno	M	39	box beam	lateral	none	unknown	unknown	load guider



Electrocution (power lines)	no	na	na	yes	no	crane	project	none	1	1	none	unkno	wn	M	22.29	tail	lateral	work platform	unknown	unknown	electrical	KTR	1731	
Electrocution (power lines)	no	na	na	no	yes	drilling	project	none	1	0	none	unkno	wn	M	31	none	none	none	unknown	unknown	equipment operator	equipment operator	1799	
Electrocution (power lines)	no	na	na	no	yes	dozer	project	none	1	0	none	unkno	wn	M	55	none	none	none	pump station houses	demolition	unknown	unknown	1795	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	unkno	wn	M	33	wood	hoisting	none	none	unknown	spotters	unknown	1541	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	unkno	wn	M	33	wood	hoisting	none	none	unknown	unknown	unknown	1541	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	1	none	1:00	PM	M	23.22	ladder	lateral	ladder	building	unknown	unknown	equipment operator	1761	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	1	none	5:30	PM	M	53	none	none	none	unknown	unknown	unknown	unknown	1761	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	unkno	wn	M	39.36	scaffold	hoisting	none	none	unknown	spotters	unknown	1542	
Electrocution (power lines)	no	na	na	yes	no	crane	project	none	2	0	none	1:20P	PM	M	35	none	none	none	unknown	unknown	unknown	unknown	1542	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	unkno	wn	M	25	none	none	none	unknown	unknown	unknown	unknown	1542	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	unkno	wn	M	37	paint	altering	scaffold	building	demolition	asbestos worker	asbestos worker	1795	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	unkno	wn	M	40	wire	altering	none	overhead power system	repairs	electrician	electrician	1799	
Electrocution (power lines)	yes	na	na	no	yes	crane	project	none	1	0	none	12.39	PM	M	40.22	ladder	lateral	ladder	building	unknown	unknown	roofers	roofers	1761
Electrocution (power lines)	improper	na	na	no	yes	crane	project	none	2	0	none	5.15	PM	M	39	gutter	hoisting	none	building	unknown	unknown	sheet metal worker	sheet metal worker	1761
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	3:30	PM	M	39	none	none	none	unknown	unknown	unknown	unknown	1793	
Electrocution (power lines)	no	na	na	no	yes	crane	project	none	1	0	none	1:00	PM	M	39	none	none	none	unknown	unknown	unknown	unknown	1793	



Electrocution (power lines)	no	na	na	no	no	yes	none	none	none	1	0	wet ground	3-30P	M	29	none	none	none	none	advertisin	repair	electrical	1731		
Electrocution (power lines)	no	na	na	no	yes	none	none	none	rock drill	project	none	1	0	unkno	wn	M	39	none	none	none	none	unknown	operator	1542	
Electrocution (power lines)	no	na	na	no	yes	none	none	none	none	project	none	1	0	00	none	AM	M	26	fascia	lateral	none	house	construction	roofer	1761
Electrocution (power lines)	no	na	na	no	yes	none	none	none	none	project	none	1	1	none	PM	M	25	32	ladder	lateral	ladder	warehouse	repair	roofer	1761
Explosion	na	yes	na	na	no	no	none	none	none	1	0	none	unkno	wn	M	35	grout	lateral	rubber plug	sewer line	repair	unknown	1771		
Explosion	na	no	na	na	no	yes	none	none	truck	project	hose	1	0	none	unkno	wn	M	65	gas propane	none	none	none	unknown	operator	1795
Explosion	no	yes	na	na	yes	yes	none	none	none	hotwork type	project	1	6	none	unkno	wn	M	21.4	unknown	M	0.41,	gases and	welders/cutte	rs	1711
Explosion	na	no	na	yes	yes	yes	none	none	none	equipment	project	1	1	none	unkno	wn	M	42.43	sludge	none	none	none	sheetmetal	duct installer	1711
Explosion	unknown	na	na	yes	yes	yes	none	none	metal grinder	project	none	1	1	none	unkno	wn	M	38.33	sodium azide	none	none	none	chemical	demolition	1795
Explosion	na	n	na	yes	yes	yes	none	none	torch	project	none	1	1	none	unkno	wn	M	33.?	chemicals of	some sort	none	none	natural gas	cutters	1795
Explosion	no	no	na	no	yes	dozer	project	none	1	0	none	unkno	wn	M	61	river rock	lateral	none	none	none	line	repair	operator	1629	
Explosion	na	no	na	no	yes	asphalt tanker	project	propane torch	1	0	none	unkno	wn	M	37	asphalt	none	none	none	none	tanker truck	unknown	unknown-roofers?	1761	
Explosion	no	no	na	no	yes	yes	none	none	metal band saw, pipe wrench	project	none	3	0	none	unkno	wn	M	20.41	gasoline	none	none	none	welders/cutte	rs	1799
Explosion	na	no	na	no	yes	yes	none	none	dozer	project	none	1	0	none	unkno	wn	M	41	gas	none	none	gas line	unknown	operator	1794
Explosion	no	yes	na	na	no	yes	none	none	gasoline powered target saw	project	none	1	0	none	11.56	AM	M	24	gasoline	none	none	gasoline tank	cutting into tank- cutter	1799	



Explosion	unkno wn	yes	na na	yes	no	none	none	none	1	4	none	unkno wn	M.M. 34.25
Explosion	no	yes	na na	no	yes	none	none	none	1	0	none	unkno wn	M.M. 31.5
Explosion	Explosion	na no	na na	no	yes	none	none	none	1	0	none	unkno wn	M.M. 2.29
Explosion/Fire	yes	na na	no	yes	no	none	none	none	1	0	none	methane or hydrogen	breaker
Explosion/Fire	no	yes	na na	yes	no	none	none	none	1	0	none	unkno wn	M.M. 2.29
Explosion/Fire	na	yes	na na	yes	yes	none	none	none	1	0	none	unkno wn	M.M. 45.30
Explosion/Fire	na	yes	na na	yes	yes	none	none	none	1	0	none	unkno wn	M.M. 36.2
Explosion/Fire	na	yes	na na	yes	yes	none	none	none	1	0	none	unkno wn	M.M. 9
Explosion/Fire	na	yes	na na	yes	yes	none	none	none	1	1	none	unkno wn	M.M. 42.41
Explosion/Fire	na	no	na no	yes	yes	none	none	none	1	0	none	unkno wn	M.M. 55
Explosion/Fire	na	yes	na na	no	yes	no	none	none	1	0	none	unkno wn	M.M. 55
Explosion/Fire	na	yes	na na	no	yes	no	none	none	1	0	none	unkno wn	M.M. 55
Explosion/Fire	na	yes	na na	no	yes	no	none	none	1	0	none	unkno wn	M.M. 55
Explosion/Fire	na	method improp er	na na	yes	no	yes	none	none	1	0	none	unkno wn	M.M. 60.7
Explosion/Fire	na	method improp er	na na	yes	yes	yes	none	none	1	0	none	unkno wn	M.M. 60.7
Explosion/Fire	na	yes	na na	yes	yes	none	none	none	1	1	none	unkno wn	M.M. 23.21
Explosion/Fire	na	yes	na na	yes	yes	none	none	none	1	1	none	unkno wn	M.M. 32.34
Explosion/Fire	na	no	na na	yes	yes	no	none	none	1	3	none	unkno wn	M.M. 34
Explosion/Fire	no	no	na na	yes	yes	yes	yes	yes	1	0	none	unkno wn	M.M. 58.46
Fall from elevation	na	na	>6'	no	yes	no	none	none	1	0	none	unkno wn	M.M. 7.30
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	ran	unkno wn	M.M. 35
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	unkno wn	M.M. 65



Fall from elevation	na	na	>6'	no	no	unknown	none	none	1	0	none	AM	M	24	none	none	scaffold	house	unknown	roofer	1521		
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	wn	M	47	none	none	ladder, temp	platform	unknown	construction	roofer	1521	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	42	none	none	ladder, temp	platform	unknown	construction	electrical	1731	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	51	none	none	scaffold	building	unknown	roofer	1521		
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	57	conduit	altering	ladder	building	unknown	electrical	1731		
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	54	wood	lateral	planks	building	unknown	new	construction	carpenter	1542
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	PM	M	42	wood	none	ramp	unknown	unknown	unknown	unknown	1541	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	46	roofing	material	lateral	none	building	demolition	demolisher	1541	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	29	none	none	power	pole	unknown	electrician	1623		
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	52	none	none	ladder/scaff	old	unknown	unknown	unknown	1542	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	58	none	none	none	building	new	construction	roofer	1541	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	33	none	none	ladder	unknown	unknown	unknown	unknown	1542	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	wn	M	60	none	none	house	unknown	roof work	new	construction	steel worker	1521
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	PM	M	30	roof	material	lateral	none	building	new	construction	steel worker	1542



Fall from elevation	na	>6	no	yes	none	none	1	0	none	unkno	M	38	none	none	none	building	unknown	unknown	unknown	1542	
Fall from elevation	na	>6	no	no	none	none	1	0	none	unkno	M	46	none	none	ladder	house	new construction	painter	painter	1521	
Fall from elevation	na	>6	no	no	yes	none	1	0	none	unkno	M	53	none	none	plank	hospital	renovation	carpenter	carpenter	1542	
Fall from elevation	na	>6	no	yes	none	none	1	0	none	8:00P	M	39	37	none	personnel	platform	Kingdome repair	sandblasting/ painting	sandblasting/ painting	1721	
Fall from elevation	na	>6	no	yes	no	crane	project	none	2	0	none	M	37	none	none	telephone system	line	installation-equip	line	1731	
Fall from elevation	na	>6	no	no	no	digger derrick truck	project	none	1	0	none	unkno	M	37	none	none	telephone system	unknown	unknown	unknown	1731
Fall from elevation	na	>6	no	no	no	snap link?	project	none	1	0	none	unkno	M	39	staircase	hosting	none	building	repair	spotter	1542
Fall from elevation	na	>6	no	no	no	none	none	1	0	none	unkno	M	226	none	none	platform	building	unknown	carpenter	carpenter	1542
Fall from elevation	na	>6	no	yes	yes	scissor lift	project	none	0	1	none	unkno	M	?	vent pipe	lateral	none	unknown	unknown	upped over from hole in floor	1731
Fall from elevation	na	>6	no	yes	none	none	none	1	0	none	8:00A	M	46	gutters	lateral	ladder	house	repair	roofers	1721	
Fall from elevation	na	>6	no	no	yes	none	none	1	0	none	unkno	M	41	electric cable	lateral	none	building	unknown	electrical	1731	
Fall from elevation	na	>6	no	no	yes	none	none	1	0	none	8:15	M	53	mailbox	lateral	none	garage	new construction	roofer	1521	
Fall from elevation	na	>6	no	yes	yes	none	none	1	0	none	unkno	7:00P	21	28	none	none	tower	unknown	unknown	unknown	1731
Fall from elevation	na	>6	no	yes	yes	unknown	none	none	3	0	wn	M	18	none	none	none	building	unknown	electricians	1522	
Fall from elevation	na	>6	no	yes	yes	elevating platform	project	none	2	0	none	unkno	M	37	36	none	none	none	none	unknown	1731
Fall from elevation	na	1-6	no	yes	no	pickup truck	license	none	1	0	none	unkno	M	24	none	none	none	none	electrical ktr	1731	



Fall from elevation	na	na	>6' no	yes	yes	none	none	none	1	0	none	unkno	metal scaffold board	apartment building	new construction	laborer	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	1.15	light fixture lateral	building	repair	electrical ktr	
Fall from elevation	na	na	>6' no	yes	yes	none	none	none	1	0	none	61	light fixture lateral	building	repair	electrical ktr	
Fall from elevation	na	na	>6' no	yes	yes	none	none	none	1	0	none	9-18	power pole	demolition	electrical	1731	
Fall from elevation	na	na	>6' no	no	yes	none	none	bucket truck	project	none	1	0	none	52	power pole	demolition	electrical
Fall from elevation	na	na	>6' yes	no	yes	none	none	none	1	0	none	7.51	horstng none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	48	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	7.30	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	45	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	12.00	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	27	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	no	none	none	aerial lift	project	none	1	0	none	2.09P	none	none	electrical
Fall from elevation	na	na	>6' no	no	no	none	none	none	1	0	none	40	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	no	none	none	none	1	0	none	51	wood	work platform	building	unknown	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	55	wood	work platform	building	unknown	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	64	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	42	none	none	none	electrical	
Fall from elevation	na	na	>6' no	no	yes	none	none	mobile crane	project	saw	1	0	none	1.00	concrete	altering	none
Fall from elevation	na	na	>6' no	no	yes	none	none	mobile crane	project	saw	1	0	none	36	concrete	altering	none
Fall from elevation	na	na	>6' no	no	yes	none	none	mobile crane	project	saw	1	0	none	unkno	none	none	none
Fall from elevation	na	na	>6' no	no	yes	none	none	mobile crane	project	saw	1	0	none	29	none	none	none
Fall from elevation	na	na	>6' no	no	yes	none	none	mobile crane	project	saw	1	0	none	29	none	ladder	house
Fall from elevation	na	na	>6' no	no	yes	none	none	mobile crane	project	saw	1	0	none	unkno	none	none	Unknown



Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	roof	new	construction	roofer	1541			
Fall from elevation	na	na	>6'	no	yes	elevator	project	1	0	none	unkno	M	16	material	building	elevator installation/re	1541		
Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	M	37	none	none	building	unknown pair		
Fall from elevation	na	na	>6'	use	no	none	none	1	0	none	unkno	M	23	none	electrical	electrical	1731		
Fall from elevation	na	na	>6'	no	no	none	none	1	0	none	unkno	M	39	none	none	power pole	repair	cable tv Ktr 1731	
Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	M	31	none	none	house	new construction	roofer 1531	
Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	M	52	none	none	fuel oil tank	renovation	electrical 1731	
Fall from elevation	na	na	>6'	yes	yes	none	none	1	0	none	unkno	M	38	metal	lateral	none	new roofers/metal workers	1541	
Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	M	33	wood	lateral	ladder	building	new construction	1541
Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	M	32	material	roofing	skylight-roof	manufacturing plant	new construction	carpenter 1541
Fall from elevation	na	na	no	no	yes	none	none	1	0	none	unkno	M	29	side awning	lateral	ladder	house	demolition	awning removal 1522
Fall from elevation	na	na	no	no	yes	none	none	1	0	none	unkno	M	24	metal duct	none	platform	unknown	unknown	metal worker 1541
Fall from elevation	na	na	>6'	no	no	yes	none	1	0	none	unkno	M	38	exterior sheeting	lateral	opening	house	new construction	Manual Mat Handling-no fall protect 1521
Fall from elevation	na	na	>6'	no	yes	none	none	1	0	none	unkno	M	41	wood	hoisting	scaffold	house	new construction	carpenters 1521
Fall from elevation	na	na	>6'	no	no	yes	none	1	0	none	unkno	M	38	unknown	lateral	none	building	unknown	electrical Ktr 1731



Fall from elevation	na	na	yes	fall	no	no	none	none	none	none	10.00	AM	M	36	none	none	none	high voltage system	repair	electrician	1623		
Fall from elevation	na	na	>6'	no	yes	no	none	none	none	none	1.0	none	unkno	M	31	none	scaffold	none	unknown	supervisor	1542		
Fall from elevation	na	na	unk	no	wn	no	yes	none	none	none	1.30	none	PM	M	53	wood	lateral scaffold	unknown	unknown	unknown	1721		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	9.20A	none	M	M	58	none	none	ladder	unknown	unknown	unknown (electrical KTR)	1731	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	1.0	none	M	M	41	train	paint and tools	hoisting scaffold	building	unknown	painter/glazier	1721	
Fall from elevation	na	na	>6'	no	no	no	none	none	none	none	2.00	train	PM	M	41	paint and tools	hoisting scaffold	building	unknown	painter	painter	1721	
Fall from elevation	na	na	>6'	no	yes	no	none	none	none	none	11.15	none	AM	M	38	39	none	none	none	building	unknown	painter	1721
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	1.1	none	unkno	M	57	none	none	none	none	building	unknown	painter	1721
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	5.45	none	PM	M	25	air net/tarp	lateral	none	none	building	unknown	painter	1721
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	9.00	none	AM	M	38	18	gin pole	hoisting	none	radio tower	unknown	painter	1721
Fall from elevation	na	na	>6'	na	yes	yes	none	none	none	none	1.1	none	unkno	M	26	tarp shroud	hoisting	scaffold	water tower	unknown	painter	1721	
Fall from elevation	na	na	impro	per	use	no	no	unk	unk	unk	1.0	none	wn	M	51	none	none	none	building	unknown	painter	1623	
Fall from elevation	na	na	unk	no	wn	no	yes	none	none	none	1.0	none	unkno	M	44	none	none	none	water tower	unknown	painter	1721	
Fall from elevation	na	na	unk	no	wn	no	yes	none	none	none	1.0	none	unkno	M	36	plywood	lateral	none	bridge	unknown	painter	1711	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	1.0	none	unkno	M	45	none	none	none	powerplant	unknown	painter	1711	
Fall from elevation	na	na	>6'	use	impro	per	no	yes	none	none	1.0	none	wn	M	36	plywood	lateral	none	bridge	new construction	hvac worker	1622	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	none	11.30	none	AM	M	45	rof of material	lateral	none	roof opening	building	rehab	carpenter	1542



Fall from elevation	na	na	>6' no	no	no	bucket truck	project	none	1	0	none	unkno wn	M	33	none	none	utility pole system	unknown	electrician	1623		
Fall from elevation	na	na	>6' yes	no	no	none	none	come-along	1	0	none	9 00 AM	M	22	tower	hoisting	new construction	construction	unknown	1623		
Fall from elevation	na	na	>6' no	no	no	none	none	none	1	0	none	unkno wn	M	49	concrete forms	lateral	walkway	bridge	new construction	carpenter	1622	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno wn	M	31	none	none	building	repair	working on roof parapet wall	1741		
Fall from elevation	na	na	>6' no	no	yes	none	none	pry bar	1	0	none	unkno wn	M	41	refrigerators	lateral	none	complex	unknown	assisting in hauling operations	1711	
Fall from elevation	na	na	1-6' feet; no	yes	no	pickup truck	project	none	1	0	none	unkno wn	M	61	containers	lateral	none	none	securing load	1711		
Fall from elevation	na	na	>6' no	yes	yes	flatted truck	project	none	1	0	none	unkno wn	M	33	none	none	bridge deck	unknown	unknown	1611		
Fall from elevation	na	na	>6' no	no	no	none	none	none	1	0	none	unkno wn	M	22	wood	lateral	catwalk	theater	unknown	unknown	1711	
Fall from elevation	na	na	unkno wn; no	yes	no	scissori ft	project	none	1	1	none	9 00 AM	M	54?	none	none	wood beam	building	new construction	carpenter	1542	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	7 48 AM	M	48	none	none	ladder	building	repair	plumber/pipe fitter	1711	
Fall from elevation	na	na	>6' yes	no	yes	none	none	none	1	0	none	9 30 AM	M	48	none	none	ladder	building	new construction	carpenter	1542	
Fall from elevation	na	na	>6' no	no	yes	none	none	hammer	1	0	none	unkno wn	M	54	wood	none	none	ladder	house	repair	hvac mechanic	1711
Fall from elevation	na	na	9' unkno wn; yes- no impro per	no	no	yes	none	none	1	0	none	unkno wn	M	60	none	none	concrete forms	unknown	construction	carpenter?	1611	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	wnd	unkno wn	M	27	wood	none	none	unknown	none	warehouse; repair work	1542	



Fall from elevation	na	na	1-6' no	no	yes	none	none	none	1	0	none	unkno	M	26	none	none	step ladder	unknown	unknown	welding fire
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno	M	25	corner plate	lateral	floating scaffold	steel bridge	new	watch
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	8.37	M	55	none	none	building	construction	ironworker	1542
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno	M	55	none	none	roof opening	building	unknown	carpenter
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	2.50	M	51	wood	lateral	openning	building	unknown	metal worker
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	10.30	M	59	electrical clamp	lateral	ladder	building	new	1542
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno	M	32	none	none	building	rehab	unknown	1731
Fall from elevation	na	na	>6' per	no	yes	none	none	none	1	0	none	unkno	M	17	none	none	new	construction	roofer	1542
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno	M	60	forms	none	building	rehab	unknown	1542
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	0	none	unkno	M	28	none	none	new	construction	carpenter	1542
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	0	icc	unkno	M	28	none	none	ladder and platform	crypt	power	structural
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	0	none	unkno	M	24	none	none	tower	tower	communications worker	1542
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	0	none	unkno	M	19	drywall	altering	new	house	drywall installer	1521
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	0	none	unkno	M	55	ac duct	none	unknown	unknown	unknown	1542
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	0	none	11.30	M	54	none	none	ladder	unknown	auditorium	1731
Fall from elevation	na	na	>6' no	no	yes	yes	none	none	1	1	none	8.00	M	48.41	none	none	new	construction	drywall	1542



Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno	M	41	roof trusses :lateral	none	house	new construction	roofer	1521		
Fall from elevation	na	na	na	na	no	yes	none	none	paint brush	1	0	none	unkno	M	53	paint	lateral	none	wharf	repair	painter	1721
Fall from elevation	na	na	>6'	yes	no	no	none	none	none	1	0	none	2.30	PM	51	none	none	building	unknown	laborer	1542	
Fall from elevation	na	na	>6'	use	yes	yes	none	none	none	1	0	none	unkno	M	54	none	none	scaffold	building	unknown	painters	1721
Fall from elevation	na	na	>6'	no	yes	none	none	none	trowel	1	0	none	AM	M	63	grout	none	scaffold	none	new construction	mason	1542
Fall from elevation	na	na	1.6'	no	yes	none	none	none	none	1	0	none	unkno	M	63	insulation	lateral	step ladder	building	unknown	insulator	1542
Fall from elevation	na	na	>6'	no	yes	none	none	none	none	1	0	none	unkno	M	42	none	none	scaffold	building	unknown	laborer	1629
Fall from elevation	na	na	unkno	no	no	yes	none	none	none	1	0	none	unkno	M	31	snow	lateral	ladder	house	repair	roof work-snow removal	1521
Fall from elevation	na	na	impro	per	no	yes	none	none	none	1	0	none	8-20P	M	25	none	none	bridge	unknown	sandblaster	1721	
Fall from elevation	na	na	>6'	use	no	yes	none	none	none	1	0	none	unkno	M	43	none	none	gin pole (hoisting apparatus)	new construction	painters	1721	
Fall from elevation	na	na	>6'	no	yes	none	none	none	spray paint equipment	1	0	none	unkno	M	41	none	none	communications tower	new construction	communications worker	1623	
Fall from elevation	na	na	yes-failed	no	no	none	none	none	none	1	0	none	11:00	AM	M	32	rope	hoisting	none	unknown	laborer	1623
Fall from elevation	na	na	>6'	not used	no	yes	none	none	aerial lift	1	0	none	unkno	M	47	beams	lateral	none	paper mill	unknown	beams (coating KTR)	1721
Fall from elevation	na	na	>6'	use	yes	yes	none	none	bucket	1	0	none	10.00	AM	M	28	none	ladder	house	new construction	carpenter	1521



Fall from elevation	na	na	yes	30'	failed	no	no	none	none	hoisting system	1	0	none	unkno wn	M	31	communications cable/person; hoisting; none	communicat ion tower	unknown	communicati on worker	1623	
Fall from elevation	na	na	>6'	no	yes	no	no	none	none	unkno wn	1	0	none	unkno wn	M	39	none	none	building	unknown	unknown	1721
Fall from elevation	na	na	unk	no	no	no	no	tugboats	project	1	0	none	unkno wn	M	33	none	scaffold platform	dock	new	construction	unknown	1629
Fall from elevation	na	na	impro per	no	no	no	no	, barge	project	1	0	none	unkno wn	M	36	paint	radio tower	unknown	radio	painters	1721	
Fall from elevation	na	na	>6'	no	no	no	no	none	none	1	0	none	unkno wn	M	38	gutters	hoisting ladder	townhouse; construction	new	gutter installation	1761	
Fall from elevation	na	na	>6'	no	yes	yes	yes	none	none	screw gun, caulk gun	1	0	seet	unkno wn	M	38	none	building	construction	new	gutter installation	1761
Fall from elevation	na	na	>6'	no	yes	yes	yes	none	w/ person	project	1	0	none	unkno wn	M	38	none	none	building	unknown	steel worker	1791
Fall from elevation	na	na	>6'	no	yes	yes	yes	none	cl	project	1	0	none	unkno wn	M	50	none	none	none	none	fall from roof, roofing co?	1761
Fall from elevation	na	na	>6'	no	yes	yes	yes	none	ing boom	forklift project	1	0	none	unkno wn	M	42	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	no	no	no	none	none	forklift project	1	0	none	unkno wn	M	40	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	yes	no	no	none	none	forklift project	1	0	none	unkno wn	M	40	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	yes	yes	yes	none	none	forklift project	1	0	none	unkno wn	M	44	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	no	no	no	none	none	forklift project	1	0	none	unkno wn	M	41	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	yes	yes	yes	none	none	forklift project	1	0	none	unkno wn	M	33	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	no	no	no	none	none	forklift project	1	0	none	unkno wn	M	25	none	none	none	none	roofer	1761
Fall from elevation	na	na	>6'	no	no	no	no	none	none	forklift project	1	0	none	unkno wn	M	32	none	none	none	none	roofer	1761



Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	35	none	none	none	building (skylight)	unknown	roofer?	1761		
Fall from elevation	na	na	>6'	no	yes	no	none	none	none	1	1	none	unkno	M	48?	none	none	scaffold	house	unknown	carpentry (putting in window trim)	1761		
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	frost	unkno	M	34	none	none	none	building	unknown	new construction	carpenter	1751	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	23	insulation	lateral	none	building	unknown	new construction	roofer	1761	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	none	1	0	none	unkno	M	40	metal roof decking material	hoisting	steel trusses	building	unknown	new construction	steel worker	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	55	skylight	lateral	none	building	renovation	steel worker	1791		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	26	none	none	none	house	repair	gutter cleaning	1761		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	19	none	none	none	building	skylight	unknown	unknown (roofer?)	1761	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	none	1	0	none	unkno	M	40	skylight covers	lateral	none	building	unknown	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	25	metal sheeting	lateral	none	building	unknown	building	unknown	steel worker	1791
Fall from elevation	na	na	>6'	no	yes	yes	none	none	none	1	0	none	unkno	M	53	none	none	none	building	unknown	building	unknown	roofer	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	39	none	none	none	building	repair	roofer	1761		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	76	none	none	ladder	building	unknown	courier for company	1761		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	21	equipment	hoisting	none	building	unknown	unknown-roofer?	1761		



Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	wn	5.00	M	45	corrugated roof deck	lateral	none	building	unknown	steel worker-roofer	1761		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	PM	52	none	none	rain barrier over openings in building	none	over	new construction	new	building	unknown roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	wn	unkno	M	21	none	none	none	building	unknown	rain barrier	steel worker-roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	wn	9.45	M	24	wood	altering	none	building	unknown	roofer	1761		
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	AM	unkno	M	47	concrete	altering	none	building	new	construction	carpenter	1751	
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	wn	2.30	M	23	metal roofing materials	lateral	none	building	shaft/building	new	construction	concrete	1771
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	PM	M	56	none	none	none	building	unknown	new	construction	roofer	1771	
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	wn	1.43	M	35	steel grating	lateral	none	stepladder	building	unknown	carpenter	1542	
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	PM	unkno	M	35	wood	lateral	none	building	unknown	unknown(steeel worker?)	carpenter	1771	
Fall from elevation	na	na	>6'	no	no	yes	yes	none	none	1	0	none	wn	1.30	M	35	wood	lateral	none	building	unknown	new	construction	carpenter	1751
Fall from elevation	na	na	>6'	no	no	yes	yes	none	none	1	0	none	PM	unkno	M	34	none	none	none	ladder	house	new	construction	carpenter	1751
Fall from elevation	na	na	>6'	no	no	yes	yes	none	none	1	0	none	wn	unkno	M	36.21	none	none	none	scaffold	barn	new	construction	carpenter	1751
Fall from elevation	na	na	>6'	no	yes	no	none	none	none	1	0	none	wn	unkno	M	21	wood	altering	none	house	new	construction	carpenter	1751	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	none	1	0	none	wn	unkno	M	34	insulation and metal decking	lateral	none	building	new	construction	steel worker	1791	
Fall from elevation	na	na	>6'	no	no	yes	yes	none	none	1	0	none	wn	3.30	M	18	wood	altering	none	house	new	construction	carpenter	1751	







Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	11:50	wood	altering	none	house	new construction	carpenter	1751			
Fall from elevation	na	na	>6'	no	yes	no	full	project	none	1	1	none	unkno	M	40	wood	altering	none	house	new construction	carpenter	1751	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	wn	47	none	none	building	unknown	unknown	new construction	carpenter	1771
Fall from elevation	na	na	>6'	yes	no	yes	none	none	none	1	0	none	3.57	M	26	bolts	altering	none	building	new construction	steel worker	1791	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	none	1	0	none	5.15	M	31	metal decking	lateral	none	building	new construction	steel worker (roofing)	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	34	skylights	lateral	none	building	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	wn	50	none	none	none	unknown	unknown	equipment operator	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	9.00	M	39	none	none	ladder	house	repair	roofers	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	wn	44	none	none	none	building	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	3.00	M	57	none	none	temporary grating	platform	new construction	welder	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	wn	30	roof tiles	lateral	none	building	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	wn	53	bridge forms	lateral	none	bridge	new construction	construction trades, steel worker?	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	3.00	M	26	truss	none	none	building	new construction	connecting trusses- steel worker?	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	10.00	M	23	metal decking	lateral	none	roof	new construction	structural	new construction metal worker	1791



Fall from elevation	na	na	>6'	no	no	yes	none	none	wheel barrow	1	0	none	wn	unkno	22	roofing material	lateral	none	building	skylight	repair	roofing	1761		
Fall from elevation	na	na	>6'	no	no	yes	none	none	unkno	1	0	none	wn	unkno	33	none	none	building	new	construction	unknown	1771			
Fall from elevation	na	na	>6'	no	yes	none	none	none	unkno	1	0	none	wn	unkno	60	none	none	building	new	construction	roofer	1761			
Fall from elevation	na	na	>6'	no	yes	yes	none	none	unkno	1	0	none	wn	hoisting (lower	11.00	wood forms	lateral	none	building	new	construction	trade?	1771		
Fall from elevation	na	na	>6'	no	no	no	none	none	unkno	1	0	none	AM	unkno	23	wood forms	sg.	unkno	building	new	construction	silos	1771		
Fall from elevation	na	na	>6'	no	no	no	none	none	unkno	1	0	none	AM	unkno	32	wood	altering	none	building	skylight	cover	building	repair	roofer	1761
Fall from elevation	na	na	>6'	no	yes	yes	none	none	unkno	1	0	none	AM	unkno	58	none	none	building	new	construction	concrete	hand-forms-	carpenter or	1771	
Fall from elevation	na	na	>6'	no	no	no	none	none	unkno	1	0	none	AM	unkno	21	wood	altering	none	building	house	repair	ladder	roofer	1761	
Fall from elevation	na	na	1-6'	no	no	no	none	none	unkno	1	0	none	wn	unkno	44	none	none	concrete	new	construction	concrete	packer/packer	carpenter?	1771	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	unkno	1	0	none	wn	unkno	46	none	none	building	new	construction	unknown-	sheet metal	carpenter?	1771	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	unkno	1	0	none	wn	unkno	34	rain gutters	altering	ladders	building	construction	worker	sheet metal	worker	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	solder kettle,	1	0	none	wn	unkno	21	concrete forms	lateral	none	highway	unknown	highway	unknown	concrete	finisher	1771
Fall from elevation	na	na	1-6'	no	yes	no	none	none	pickup truck	1	0	none	AM	unkno	31	none	none	building	unknown	roofer	unknown	concrete	finisher	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	reach boom truck	1	0	none	PM	unkno	33	none	none	sign	repair	electrical	concrete	cutting	company	1731	
Fall from elevation	na	na	>6'	no	no	yes	none	none	reach boom truck	1	0	none	wn	unkno	10.15	none	none	skylight	building	unknown	unknown	cover	cover	1771	



Fall from elevation	na	na	>6'	no	yes	no	none	none	none	activated driver and electric	1	0	none	8.00	M	44	none	none	suspension scaffold	silo	unknown	waterproofing the bin	1771
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	9.40	M	28	roof shingles	hoisting ladder	building	unknown	new	construction	steel worker	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	11.00	M	25	steel	lateral	none	store	new	construction	steel worker	1791
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	41	insulation	altering	none	building	repair	roofer	roofer	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	23	shingles	lateral	trash chute	building	repair	roofer	roofer	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	23	none	none	roof opening covers	warehouse	unknown	roofer	roofer	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	29	material	lateral	none	building	unknown	roofer	roofer	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	41	none	none	monorail system for dam	warehouse	construction	steel worker	1791	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	10.22	M	22	none	none	cross braces	cross braces	unknown	unknown	unknown	1791
Fall from elevation	na	na	>6'	no	no	yes	none	none	drill	1	0	none	9.20	M	40	none	none	lateral	none	house	unknown	side	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	36	siding	lateral	none	building	new	construction	steel worker	1791
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	25	welding leads	lateral	none	building	new	construction	steel worker-welder	1791
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	2:30	M	48	metal decking	altering	none	building	repair	metal work	metal work	1761
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	3.20	M	20,18	steel columns	none	none	steel structure	new	construction	steel workers	1791



Fall from elevation	na	na	>6'	no	yes	none	none	motorized conveyor	1	0	wet surface	7:00 AM	roof shingles	hoisting	none	building	new construction	roofing	sheet metal	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	sheet metal decking	lateral	none	building	new construction	steel worker-roofer	1761		
Fall from elevation	na	na	>6'	no	yes	none	none	none	unkno	10	0	wn	45	welding lead	none	building	new construction	steel worker-roofer	1761		
Fall from elevation	na	na	>6'	no	no	none	none	none	unkno	10	0	wn	38	welding lead	none	building	building roof	repair	roof-snow removal	1761	
Fall from elevation	na	na	>6'	no	no	none	none	none	1	0	snow	AM	33	snow	lateral	none	building	new construction	steel worker-roofer	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	PM	62	plastic	lateral	skylight opening	building	new construction	steel worker-roofer	1761	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	unkno	36	concrete	lateral	none	building	building	repair	roofer	1761
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	32	none	none	light openings	building	building	repair	roofer	1761
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	19	shingles	lateral	none	building	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	33	a/c vents	lateral	ladder	building	unknown	unknown	sheet metal worker-roof	1761
Fall from elevation	na	na	>6'	no	yes	none	none	shovel	1	0	none	unkno wn	53	gravel	lateral	skylight cover	building	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	26	metal roof sheets	lateral	none	warehouse	construction	metal worker	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	26	roof	lateral	fall protection system	building	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	47	shingles	lateral	none	house	unknown	roofer	1761	
Fall from elevation	na	na	>6'	no	yes	none	none	none	1	0	none	unkno wn	39	roofing felt	lateral	none	house	unknown	roofer	1761	



Fall from elevation	na	na	impro per use	yes	no	none	none	circular abrasive saw	1	0	none	unkno wn	M 33	none	none	single point suspension scaffold	building	unknown	unknown	unknown	1791	
Fall from elevation	na	na	>6' no	no	yes	none	none	1	0	none	2.35	M 29	brick	lateral	none	parking garage	repair	mason	mason	1741		
Fall from elevation	na	na	>6' no	no	yes	none	none	unkno	1	0	none	unkno wn	M 55	none	none	work platform	unknown	unknown	unknown	unknown	1742	
Fall from elevation	na	na	>6' no	no	yes	none	none	1	0	none	1.45	M 37	none	none	building	new	construction	mechanic	hvac	1711		
Fall from elevation	na	na	>6' no	no	yes	none	none	0	1	none	unkno wn	M 57	concrete	lateral	none	concrete retaining wall	repair	operator	operator	1629		
Fall from elevation	na	na	unkno	no	no	no	crane	project	none	0	1	none	unkno wn	M 48	hay	lateral	none	road	unknown	operator	operator	1623
Fall from elevation	na	na	1.6' no	yes	no	flatbed truck	project	none	0	1	none	unkno wn	M 42	astic	lateral	none	roof openings	new	construction	steel worker	1799	
Fall from elevation	na	na	>6' no	no	yes	none	none	1	0	none	unkno wn	M 36?	people	hoisting	none	building	unknown	unknown	unknown	1799		
Fall from elevation	na	na	yes-impro per	>6'	yes	no	truck	project pulley rope	1	1	none	unkno wn	M 33	none	none	building	new	construction	mason	1741		
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	6.00	M 33	none	none	building	unknown	truck driver	truck driver	1799		
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	9.00	M 26	none	none	scaffold	unknown	construction	mason	1741		
Fall from elevation	na	na	unkno	wn	no	yes	none	none	1	0	none	unkno wn	M 30	wood	lateral	scaffold	building	unknown	building	work platform	1741	
Fall from elevation	na	na	yes-impro	>6'	no	yes	none	none	1	0	none	unkno wn	M 28	none	none	scaffold	unknown	unknown	unknown	scaffold erector	1799	
Fall from elevation	na	na	>6' no	no	yes	none	none	aerial lift	project	none	1	0	none	unkno wn	M 38	banners	lateral	none	civic center	unknown	hanging banners from ceiling	1799
Fall from elevation	na	na	>6' no	yes	no	forklift	project	none	1	1	none	unkno wn	M 40,45	none	none	personnel basket	unknown	unknown	unknown	unknown	1542	







Fall from elevation	na	na	>6'	no	yes	no	none	none	none	1	0	none	unkno	M	38	softi	none	work	platform	garage	new	construction	carpenter	1751
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	22	control wire	altering	none	air plenum	unknown	electrical	1731		
Fall from elevation	na	na	1-6'	no	no	yes	none	none	none	1	0	none	200	PM	48	light bulbs	hoisting	stepladder	building	repair	electrical	1731		
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	unkno	M	26	wood	lateral	ladders	building, exterior	light	unknown	siding	installers	1761
Fall from elevation	na	na	>6'	yes- failed	yes	no	crane	project	none	1	0	none	unkno	M	61	work	platform	hoisting	vertical wall	building	new	construction	spotter	1622
Fall from elevation	na	na	>6'	yes	no	yes	none	none	none	1	0	none	unkno	M	31	mortar	lateral	scaffold	building	new	construction	mason	1741	
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	unkno	M	48	none	none	suspension	building	parapet repair	on roof	1741		
Fall from elevation	na	na	>6'	no	no	no	none	none	none	1	0	none	unkno	M	26,27	none	none	suspension	building	repair	on roof	1741		
Fall from elevation	na	na	>6'	impro	per	use	yes	no	none	1	2	none	unkno	M	26,27	none	none	scaffold	building	removal	building	restoration	1741	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	1.00	PM	29	frame	hoisting	scaffold	unknown	unknown	scaffold	dismantling	1741	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	11:30	AM	29	none	none	roof	building	unknown	unknown	unknown	1743	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	52	copper tubing	lateral	none	opening	building	new	construction	plumber	1711
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	52	concrete block	lateral	scaffold	building	new	construction	mason-unloading	block	1741
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	57	concrete block	lateral	scaffold	building	unknown	building	unknown	unknown	1741
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	1	0	none	unkno	M	45	none	none	none	building	unknown	mason	unknown	unknown	1741



Fall from elevation	na	na	>6'	no	yes	yes	aerial lift	project	none	1	1	none	8:00 AM	M,M,48.41	sheetrock	lateral	none	movie theater	new construction	drywall	1742			
Fall from elevation	na	ra	>6'	no	no	no	none	none	none	1	0	none	6:30 AM	M	44	brick	lateral	scaffold	building	unknown	mason insulating chimney open air parts	1741		
Fall from elevation	na	ra	>6'	yes	no	no	none	none	boatswain chair/pegging	1	0	none	unkno wn	M	53	none	none	boatswain chair	chimney unknown	unknown	mason	1741		
Fall from elevation	na	ra	>6'	no	no	yes	none	none	none	1	0	none	unkno wn	M	25	none	none	pre-engineer d building	construction	unknown	1541			
Fall from elevation	na	ra	1-6'	no	yes	yes	none	none	none	1	0	none	10:00 AM	M	21	wood	lateral	scaffold	house	new construction	mason	1741		
Fall from elevation	na	ra	>6'	no	no	no	none	none	none	1	0	none	1:30 PM	M	21	none	none	stepladder	building	repair	electrician	1731		
Fall from elevation	na	ra	1-6'	no	no	yes	none	none	none	1	0	none	unkno wn	M	28	none	none	stepladder	building	unknown	electrician helper lost balance	1741		
Fall from elevation	na	ra	>6'	no	no	yes	none	none	none	1	0	none	unkno wn	M	28	mortar	lateral	scaffold	building	unknown	mason	1741		
Fall from elevation	na	ra	>6'	no	no	yes	none	none	none	1	0	none	unkno wn	M	35	insulated paneling	lateral	none	stepladder	building	unknown	roofer	1741	
Fall from elevation	na	ra	>6'	no	yes	yes	none	none	none	1	1	none	unkno wn	M	44	none	none	altering	ladders	canopy	unknown	painting	1741	
Fall from elevation	na	ra	>6'	no	yes	yes	none	none	forklift	project	none	1	0	none	unkno wn	M	62	load person	lateral	none	building	unknown	supervisor	1795
Fall from elevation	na	ra	1-6'	no	yes	yes	none	none	none	1	0	none	11:00 AM	M	63	roofing caulk	altering ladder	building	repair	roof repairs	1741			
Fall from elevation	na	ra	>6'	no	yes	yes	none	none	knife	1	0	none	unkno wn	M	41	none	none	ladder	fiberglass storage tank	unknown	carpenter	1751		
Fall from elevation	na	ra	>6'	use	yes	yes	none	none	none	1	0	none	unkno wn	M	41	none	none	ladder	plumber/pipe fitter	unknown	plumber/pipe fitter	1711		



Fall from elevation	na	na	unk no wn	no yes	none	none	none	1	0	none	unkno wn	M	59	none	none	hosting	silo	demolition	farm worker	1795		
Fall from elevation	na	na	>6' no	no	none	none	none	1	0	none	unkno wn	M	17	sections of wood, extension cord	ladder	new construction	store	carpenter	1711			
Fall from elevation	na	na	>6' no	no	yes	none	none	1	0	none	unkno wn	M	37	none	none	roof openings	hole in ground	none	unknown	1711		
Fall from elevation	na	na	>6' no	no	yes	none	scissor lift	projec t	none	1	0	none	unkno wn	M	52	none	none	undergrou nd pipe	unknown	equipment operator	1711	
Fall from elevation	na	na	1-6' feet: no	no	yes	none	compact or	projec t	none	1	0	none	unkno wn	M	45	dirt	lateral	none	none	new construction	1711	
Fall from elevation	na	na	1-6' no	no	yes	none	none	none	1	0	none	unkno wn	M	59	window	altering	step ladder	building	repair	window work	1793	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno wn	M	40	window casing	altering	scaffold	building	unknown	window casing installer	1793	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno wn	M	36	decking, bolts, people	decking	none	building	new construction	steel worker	1791	
Fall from elevation	na	na	>6' no	no	yes	none	forklift	projec t	none	1	1	none	unkno wn	M	30	none	none	ladder	building	new construction	welder/cutter	1711
Fall from elevation	na	na	>6' no	no	yes	none	welder	1	0	none	unkno wn	M	27	rooftie down devices	lateral	rooftie down	building	new construction	unknown steel company	1791		
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno wn	M	53	none	none	none	building	repair	hvac mechanic	1711	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno wn	M	66	none	none	ladder	building	new construction	unknown	1711	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	unkno wn	M	35	metal roof panel	lateral	rooftie openings	building	unknown	steam boiler	1795	
Fall from elevation	na	na	>6' no	no	yes	none	none	none	1	0	none	11-25	M	23	debris	lateral	landing	demolition	laborer	1795		



Fall from elevation	na	na	>6'	yes	yes	no	none	none	1	1	none	unkno	wn	M	26.43	none	none	scaffold	water tank	unknown	unknown	1721		
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	59	none	none	platform	unknown	unknown	unknown	1721		
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	34	and tape	lateral	none	building	unknown	unknown	insulator/steel	1791	
Fall from elevation	na	na	>6'	yes	yes	yes	none	none	1	0	none	unkno	wn	M	51	steel sheet	lateral	none	oil refinery tank	unknown	unknown	1 worker?	1791	
Fall from elevation	na	na	>6'	no	yes	yes	none	pybar	1	0	none	unkno	wn	M	9.15	1.0	none	building	unknown	unknown	steel worker	1791		
Fall from elevation	na	na	>6'	per	no	yes	none	welding equipment	1	0	none	unkno	AM	M	38	I-beams	none	none	building	new	structural	construction metal worker	1791	
Fall from elevation	na	na	>6'	use	no	yes	none	welding equipment	1	0	none	unkno	wn	M	28	none	none	building	unknown	unknown	steel worker	1791		
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	1.50	wn	M	33	welding lead	lateral	roof	new	construction	welder	1791		
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	20	none	none	scaffold	building	unknown	new	warehouse	1791	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	37	steel brace	altering	none	building	unknown	unknown	steel worker	1791	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	61	none	none	ladder, staff	old	old	new	construction	welder	1791
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	20	sheet rock	none	building	unknown	unknown	steel worker	1791		
Fall from elevation	na	na	>6'	no	yes	yes	none	aerial lift	1	0	none	unkno	wn	M	30	chicken wire	lateral	scaffold	building	new	construction	mason	1741	
Fall from elevation	na	na	>6'	no	no	no	none	project	1	0	none	unkno	wn	M	46	decking	lateral	none	building	new	sheet rock	construction worker	1742	
Fall from elevation	na	na	>6'	no	no	no	none	project	1	0	none	unkno	wn	M	45	rooftop	altering	none	building	new	demolition	grain bin cutter	1791	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	46	decking	lateral	none	building	new	construction	steel worker	1791	
Fall from elevation	na	na	>6'	no	yes	yes	none	none	1	0	none	unkno	wn	M	45	rooftop	altering	none	building	new	demolition	grain bin cutter	1795	



Fall from elevation	na	na	yes- guard ails	1-6 ails	no	yes	none	none	none	none	1	0	none	unkno	M	31	tape/drywall	altering	none	building	unknown	drywaller	1742	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	cart	1	0	none	unkno	M	49	none	none	floor opening	building	unknown	unknown	1742	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	paint brush/scraper	1	0	none	unkno	M	60	none	none	scissor lateral	building	repair	painter	1799	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	project	1	0	none	12.30	PM	M	36	metal t-bar	scissor lateral	supermark	new construction	drywall?	1742	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	lift	1	0	none	unkno	M	29	drywall	altering	none	building	unknown	drywall	1742	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	project	bucket	1	0	none	unkno	M	36	light pole	hoisting	none	unknown	demolition	electrician	1799
Fall from elevation	na	na	>6'	no	yes	no	forklift	project	none	1	1	none	11.30	AM	M	53.32	none	none	working platform	building	unknown	demolition	electrician	1799
Fall from elevation	na	na	>6'	no	yes	yes	none	none	none	hammer	1	0	none	unkno	M	40	wood	lateral	ladder	building	unknown	demolition	electrician	1799
Fall from elevation	na	na	>6'	wn	no	yes	none	none	none	yes- impro- per	1	0	none	unkno	M	21	none	none	none	microwav	microwav	demolisher	1743	
Fall from elevation	na	na	>6'	per	no	yes	none	none	none	yes- impro- per	1	0	none	unkno	M	33	none	none	none	communications	new construction	demolisher	1751	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	yes- impro- per	1	0	none	unkno	M	51	oil	lateral	none	building	unknown	carpenter?	1751	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	yes- impro- per	1	0	none	unkno	M	48	welding lead	lateral	none	powerplant	repairs	boilermaker	1796	
Fall from elevation	na	na	>6'	no	no	no	yes	none	none	yes- impro- per	1	0	none	4.55	PM	M	31	roof materials	hoisting	opening	warehouse	demolition	demolition	1796
Fall from elevation	na	na	>6'	no	no	no	yes	none	none	welder	1	0	none	unkno	M	34	electrical panel	lateral	trash chute	building	demolition	demolisher/a borer	1795	
Fall from elevation	na	na	>6'	no	no	yes	none	none	none	yes- impro- per	1	0	none	unkno	M	31	roof materials	hoisting	opening	warehouse	demolition	demolition	1795	



Fall from elevation	na	na	>6'	no	yes	no	none	none	0	1	none	10-40	AM	M	31	debris	lateral	none	building	demolition	laborer	1795				
Fall from elevation	na	na	>6'	no	no	no	none	none	1	0	none	unkno	wn	M	47	none	none	none	building	unknown	sheetmetal	duct installer	1711			
Fall from elevation	na	na	yes- >6'	failed	no	no	elevator	project	1	0	none	unkno	wn	M	31	elevator	hosting	car-sling	building	repair	elevator	repairer	1796			
Fall from elevation	na	na	>6'	no	no	no	none	none	1	0	none	unkno	wn	M	31	roofing	material	altering	none	building	demolition	asbestos	worker	1795		
Fall from elevation	na	na	1-6'	no	no	yes	none	none	power	washer	1	0	none	PM	M	33	none	none	scaffold	building	unknown	washing	ceiling	1799		
Fall from elevation	na	na	>6'	no	no	unknown	none	none	torch	1	0	none	unkno	wn	M	36	rebar/roof	trusses	altering	none	building	demolition	structural	cutter	1795	
Fall from elevation	na	na	>6'	no	no	no	none	none	project	torch	1	0	none	unkno	wn	M	58	stairway	hosting	none	building	demolition	structural	cutter	1795	
Fall from elevation	na	na	>6'	no	no	yes	none	none	torch	1	0	none	unkno	wn	M	37	rebar and	concrete	altering	none	building	demolition	structural	cutter	1795	
Fall from elevation	na	na	>6'	no	no	yes	none	none	1	0	none	10-00	AM	M	37	steel	lateral	none	roof	Building	demolition	new	metal	1629		
Fall from elevation	na	na	>6'	use	no	yes	none	none	1	0	none	unkno	wn	M	27	none	none	scaffold	Clarifier	unknown	plumber	plumber	1629			
Fall from elevation	na	na	>6'	use	no	yes	none	none	1	0	none	unkno	wn	M	36	metal	altering	none	building	unknown	cutter	1795				
Fall from elevation	na	na	>6'	no	no	yes	none	none	torch	1	0	none	unkno	wn	M	51	concrete	lateral	none	building	construction	new	concrete	finisher	1711	
Fall from ground level	na	na	na	na	no	yes	none	none	wheelbarrow	1	0	none	unkno	wn	M	26	steel	columns	none	none	structure	construction	sewage	effluent	channel	1791
Fall from ground level	na	na	na	na	yes	no	none	none	0	1	wind	PM	M	32	steel	columns	none	none	building	construction	new	construction	steel workers	1629		
Fire	na	na	yes	na	no	yes	yes	none	pneumatic	chipping	2	0	none	AM	M	32,37	gas/vapors	none	none	none	plumber/pipe	repair	plumber/pipe	fitter	1629	



Fire	na	na	na	no	yes	no	bucket truck	project	none	0	1	none	AM	M	32	guy wire, bolts	lateral	none	power system	unknown	electrician	1623		
Fire	na	no	na	na	no	no	bulldozer	project	hydraulic line	1	0	none	unkno	wn	M	57	hydraulic fluid	none	unknown	none	unknown	operator	1611	
Natural causes	na	na	na	na	na	no	none	none	none	1	0	none	PM	M	48	none	none	none	none	unknown	welder	1629		
Natural causes	na	na	na	na	na	no	none	none	none	1	0	heat	unkno	wn	M	22	roofing debris	lateral	none	building	unknown	roof laborer	1761	
Natural causes	na	na	na	na	na	no	none	none	none	1	0	none	AM	M	50	none	none	none	none	unknown	unknown	unknown	1623	
Natural causes	na	na	na	na	na	no	truck	project	none	1	0	none	wn	M	59	none	none	none	none	unknown	unknown	unknown	1752	
Natural causes	na	na	na	na	na	no	none	none	none	1	0	none	wn	M	23	none	none	none	none	unknown	unknown	unknown	1623	
Natural causes	na	na	na	na	na	no	none	none	none	1	0	none	unkno	wn	M	50	none	none	none	none	unknown	unknown	unknown	1629
Natural causes	na	na	na	na	yes	no	none	none	none	1	0	none	wn	M	55	none	none	none	none	new	construction	welder	1791	
Natural causes	na	na	na	na	no	no	none	none	none	1	0	none	unkno	wn	M	54	none	none	ladder	wall	unknown	unknown	1761	
Natural causes	na	na	na	na	no	no	none	none	none	1	0	none	unkno	wn	M	52	none	none	none	house	unknown	sheetmetal duct installer	1711	
Natural causes	na	na	na	na	no	no	none	none	none	1	0	none	PM	M	39	none	none	none	none	house	unknown	carpenter	1521	
Natural causes	na	na	na	na	no	no	none	none	none	hand-held grinder	1	0	heat	PM	M	20	none	none	none	water tower	unknown	unknown	1791	
Natural causes	na	na	na	na	no	no	none	none	none	1	0	none	AM	M	42	none	none	ladder	unknown	unknown	unknown	1761		



Natural Causes	na	na	>6'	no	no	none	none	1	0	none	unkno	wn	M	37	none	none	none	building	unknown	roofer	1542		
Natural causes	na	na	na	ha	no	no	none	1	0	none	unkno	wn	M	49	unknown	none	none	landscape	unknown	unknown-trimming brush	1742		
Natural causes	na	na	na	na	na	no	none	none	1	0	none	unkno	wn	M	48	none	none	fence	repair	laborer	1542		
Natural causes	na	na	na	na	na	no	none	none	1	0	none	2:45		M	51	none	none	none	unknown	unknown	unknown	1629	
Natural causes	na	na	na	na	na	no	none	none	1	0	none	unkno	wn	M	51	none	unknow	none	unknown	owner	1542		
Natural causes	na	na	na	na	na	yes	no	loader	project	none	1	0	none	unkno	wn	M	51	none	none	new construction	operator	1623	
Natural causes	na	na	10'	no	yes	no	backhoe	project	none	1	0	none	7:00		M	52	none	trench	new	construction equipment	1623		
Natural causes	na	na	>6'	no	no	no	none	none	1	0	none	11:00		M	41	bolts	lateral	stepladder	steel structure	new construction	steel worker?	1791	
Natural causes	na	na	na	na	na	no	no	none	1	0	none	12:00		M	58	none	none	none	none	unknown	unknown	1623	
Natural causes	na	na	na	na	na	no	no	none	1	0	none	unkno	wn	M	38	none	none	none	none	none	new	1629	
Natural causes	na	na	na	na	na	no	no	none	1	0	none	11:15		M	63	none	none	scaffold	building	construction	mason	1741	
Natural causes	na	na	na	na	na	no	no	none	1	0	none	3:00		M	54	none	none	none	none	none	new	1629	
Natural causes	na	na	na	na	na	no	no	none	1	0	heat	12:30		M	39	none	none	none	unknown	new construction	mason	1741	
Natural causes	na	na	na	na	na	no	no	none	1	0	heat	2:30		M	62	none	none	none	none	house	new construction	electrical	1731
Natural causes	na	yes	na	ha	no	no	none	none	1	0	none	unkno	wn	M	32	none	none	none	culvert	repair	welder/cutter	1629	



Natural causes	na	na	na	na	no	none	na	1	0	heat	2.00	PM	M	21	none	none	none	none	new construction	laborer	1622
Natural causes	na	na	unk	wn	no	no	none	1	0	none	unkno	wn	M	52	metal sheeting	lateral	scaffold	building	unknown	steel worker	1791
Natural causes	na	na	na	na	no	none	none	1	0	none	unkno	wn	M	19	none	none	none	unknown	drywaller	1742	
Natural causes	na	na	na	na	no	none	none	1	0	none	heart	unkno	wn	M	29	cable trays	lateral	none	unknown	electrical	1731
Natural causes	na	na	na	na	no	none	manlift	project	none	1	0	attack	wn	M	28	none	none	none	unknown	painter	1799
Natural causes	na	na	1-6	na	no	none	none	1	0	none	unkno	wn	M	53	none	none	none	none	plumber/pipe fitter	1711	
Natural causes	na	na	na	na	no	none	none	1	0	none	unkno	wn	M	43	piping	alternating	stepladder	unknown	plumber/pipe fitter	1711	
Natural causes	na	na	1-6	no	no	none	none	1	0	none	unkno	wn	M	45	none	none	various	unknown	hvac mechanic	1711	
Natural causes	na	na	na	na	no	none	none	1	0	none	8.50	PM	M	42	cabinets	lateral	none	none	unknown	carpenter	1751
Natural causes	na	na	na	na	no	none	dolly	1	0	none	unkno	wn	M	55	none	none	none	none	equipment operator	1611	
Natural causes	na	na	>6	no	no	none	construction	machine	project	none	1	0	none	unkno	wn	M	30	none	none	unknown	1611
Natural causes	na	na	na	na	no	none	none	1	0	none	11.30	AM	M	52	cedar lumber	lateral	none	none	equipment operator	1611	
Natural causes	na	na	na	na	no	none	forklift	project	none	1	0	heat	PM	M	57	none	none	water line system	unknown	laborer (pipedlayer)	1711
Natural causes	na	na	na	na	no	none	none	1	0	none	2.45	PM	M	53	none	none	none	unknown	unknown	1611	



Natural causes	na	na	na	no	no	no	none	none	1	0	none	5.20	M	35	none	none	house	repair	roofer	1761				
Natural causes	na	na	na	no	no	no	none	none	1	0	none	unkno	wn	M	35	drywall	lateral	none	new construction	drywall	1751			
Other	na	na	na	na	no	no	front end	loder	project	none	1	0	none	unkno	M	53	none	none	unknown	guardrails and culvert	equipment operator	1794		
Other	no	yes	na	na	no	yes	none	none	unknown	1	0	none	unkno	wn	M	40	nitrogen	none	reactor	repair	unknown	1799		
Other	na	na	na	no	yes	yes	none	none	circular saw	1	0	none	unkno	wn	M	21	wood	altering	none	building	unknown	roofer	1761	
Other	na	na	na	no	no	no	none	none	truck	project	none	1	0	none	11.00	AM	M	29	water	lateral	none	new construction	truck driver	1794
Other	na	na	na	no	no	yes	scraper	project	none	1	0	none	unkno	wn	M	30	none	none	none	none	unknown	operator	1794	
Other	na	na	na	no	no	no	none	none	dumptr	project	none	1	0	none	unkno	wn	M	34	unknown	none	building	repair	plumber/pipe fitter	1711
Other	na	na	na	no	yes	yes	ck	dumptr	project	none	1	0	none	unkno	wn	M	42	sand	lateral	debris pile of trees	golf course	new construction	operator	1611
Struck by equipment	na	na	na	na	yes	no	crane	project	wrecking ball	1	0	none	unkno	wn	M	36	none	none	none	parking garage	demolition	demolisher	1542	
Struck by equipment	na	na	na	na	yes	no	truck	private	none	1	0	none	unkno	wn	M	32	traffic controls	lateral	none	highway	new construction	traffic controller	1611	
Struck by equipment	na	na	na	na	yes	no	backhoe	project	ourrger	1	0	none	unkno	wn	M	18	none	none	excavation	unknown	unknown	compacting soil	1794	
Struck by equipment	na	na	na	na	yes	yes	trackhoe	project	none	1	0	none	unkno	wn	M	60	debris	lateral	none	unknown	unknown	laborer	1794	
Struck by equipment	na	na	na	na	yes	yes	tractor-trailer	private	none	1	0	none	unkno	wn	F	23	traffic controls	lateral	none	highway	unknown	traffic controller	1611	



Struck by equipment	na	na	16'	na	no	no	boring machine:project	none	1	0	none	unkno	M	57	none	none	trench	unknown	new construction	new equipment	
Struck by equipment	no	na	na	na	yes	no	drill	project:pipe wrench	1	0	none	unkno	M	23	none	none	none	unknown	new construction	new equipment	
Struck by equipment	na	na	na	na	yes	no	hackhoe:project	none	1	0	none	unkno	M	35	none	none	none	unknown	new construction	new equipment	
Struck by equipment	na	na	na	na	yes	yes	scraper	project:none	1	0	none	11.00	AM	37	none	none	none	new	construction	operator	
Struck by equipment	na	na	na	na	yes	no	loader	project:none	1	0	none	unkno	wn	M	57	none	none	new	construction	operator	
Struck by equipment	na	na	na	na	yes	no	scraper:project	eye level	1	0	none	1.00	PM	M	49	none	none	none	new	construction	operator
Struck by equipment	na	na	na	na	yes	no	scraper:project	none	1	0	none	unkno	wn	M	25	none	none	new	construction	operator	
Struck by equipment	na	na	na	na	yes	no	roller:compact:or	project:none	1	0	none	unkno	wn	M	61	rock	lateral	none	roadway	unknown	passenger on roller
Struck by equipment	na	na	na	na	yes	no	dumpru	project:none	1	0	none	unkno	wn	M	21.0	none	none	new	construction	operator	
Struck by equipment	na	na	na	na	yes	no	backhoe:project	bucket	1	0	none	unkno	wn	M	51	none	none	new	construction	operator	
Struck by equipment	na	na	4'	na	yes	no	loader	project:none	1	0	none	unkno	wn	M	41	concrete	lateral	none	roadway	repair	
Struck by equipment	na	na	na	na	yes	yes	loader	project:none	1	0	none	unkno	wn	M	55	dirt	lateral	none	new	construction	operator
Struck by equipment	na	na	na	na	yes	no	dumpru	project:none	1	0	none	unkno	wn	M	39	elevator	none	new	construction	operator	
Struck by equipment	no	na	na	na	yes	no	elevator:project	none	1	0	none	unkno	wn	M	44	none	none	new	construction	operator	
Struck by equipment	na	na	na	na	yes	yes	flatbed:truck	project:none	1	0	none	unkno	wn	M	11.34	earth	lateral	trench	water	new	construction
Struck by Equipment	na	na	na	na	yes	no	dumpru	project:none	1	0	none	unkno	wn	M	46	earth	lateral	main	main	motor transportation	



Struck by equipment	na	na	na	na	yes	yes	yes	yes	asphalt truck	project	none	1	0	none	unkno	wn	M	43	blueprints	none	none	unknown	unknown	unknown	unknown	1611	
Struck by equipment	na	na	na	na	yes	yes	no	yes	tractor-trailer	project	none	1	0	none	unkno	wn	M	67	none	none	none	pipe system	repair	flagger	flagger	1611	
Struck by equipment	na	na	na	na	yes	yes	no	yes	or, two pickup trucks	project	none	1	0	none	unkno	wn	M	30.31	none	none	none	highway	unknown	concrete finishers	concrete finishers	1622	
Struck by equipment	na	na	na	na	yes	yes	no	yes	front end loader	project	none	1	0	none	unkno	wn	M	57	pipe	lateral	none	unknown	unknown	unknown	unknown	1623	
Struck by equipment	na	na	na	na	yes	yes	no	yes	vehicle	private	none	1	0	none	unkno	wn	M	62	none	none	none	gas station	unknown	filling gas tank?	filling gas tank?	1799	
Struck by equipment	na	na	na	na	yes	yes	no	yes	vehicle	private	none	1	0	none	unkno	wn	M	57	none	none	none	roadway	unknown	flagger	flagger	1611	
Struck by equipment	na	na	na	na	yes	yes	no	yes	dumptruck	project	none	1	0	none	unkno	wn	M	33	dirt	lateral	none	none	unknown	unknown	unknow-backed over	1611	
Struck by equipment	na	na	na	na	yes	yes	no	yes	flated truck	project	none	1	0	none	unkno	wn	M	23	none	none	none	none	unknown	operator	equipment operator	1611	
Struck by equipment	na	na	na	na	yes	yes	no	yes	semitruck	private	none	1	0	none	unkno	wn	M	42	traffic controls	lateral	none	none	roadway	repair	traffic controller	traffic controller	1611
Struck by equipment	na	na	na	na	yes	yes	no	yes	dumptruck	project	handgrader	1	0	none	unkno	wn	M	17	none	none	none	roadway	repair	grader	grader	1611	
Struck by equipment	na	na	na	na	no	no	yes	no	asphalt truck	project	none	1	0	none	unkno	wn	M	35	none	none	none	roadway	unknown	unknown	unknown	1611	
Struck by equipment	na	na	na	na	yes	yes	no	yes	loader	project	wire rope choker	1	0	none	unkno	wn	M	37	none	none	none	none	unknown	hauling operations	hauling operations	1629	
Struck by equipment	na	na	na	na	yes	yes	no	yes	vehicle	private	none	1	0	none	unkno	wn	M	31	traffic controls	lateral	none	highway	repair	traffic controller	traffic controller	1611	
Struck by equipment	na	na	na	na	yes	yes	yes	yes	semi truck	private	none	1	0	none	unkno	wn	M	40	vegetation	lateral	none	highway	unknown	laborer	laborer	1629	



Struck by equipment	na	na	na	yes	no	dumptruck	project	none	1	0	none	wn	unkno	M	30	none	none	none	unknown	nd	electrical	1742		
Struck by equipment	na	na	na	5-7 feet	na	backhoe	project	none	1	0	none	PM	2.15	M	40	none	none	trench	electrical	lines	renovation	laborer	1623	
Struck by equipment	na	na	na	yes	no	vehicle	private	none	1	2	none	wn	unkno	M	53	none	none	highway	repair	traffic controllers	bridge tender	1611		
Struck by equipment	na	na	na	yes	no	vehicle	private	none	1	0	none	wn	unkno	M	60	none	none	bridge	unknown	bridge	unknown	bridge tender	1611	
Struck by equipment	na	na	na	no	yes	dozer	project	rebar	1	0	none	wn	unkno	M	37	none	none	none	none	unknown	equipment operator	equipment operator	1611	
Struck by equipment	na	na	na	yes	no	crane	project	shackles/limes	1	0	none	wn	unkno	M	37	none	none	barge	none	new construction	new construction	spotters	1629	
Struck by equipment	na	na	4'	yes	no	backhoe	project	none	1	0	none	AM	11:30	M	42	pvc piping	lateral	trench	none	plumber/pipe fitter	plumber/pipe fitter	1629		
Struck by equipment	na	na	na	yes	yes	widening	project	none	1	0	none	wn	unkno	M	46	none	none	none	roadway	unknown	paving worker	paving worker	1611	
Struck by equipment	na	na	na	yes	yes	yes	forklift	project	none	1	0	none	PM	1:30	M	19	none	none	none	unknown	metal worker	metal worker	1541	
Struck by equipment	na	na	na	yes	no	tractor-trailer	private	compressor	1	2	none	wn	unkno	M?	?	47.2% debris	lateral	none	none	bridge	unknown	bridge decking installers	bridge decking installers	1611
Struck by equipment	na	na	na	yes	yes	no	dumptruck	project	none	1	0	none	wn	unkno	M	39	rock	lateral	none	roadway	repair	equipment operator	equipment operator	1611
Struck by equipment	na	na	na	yes	yes	yes	sweeper	project	none	1	0	none	wn	unkno	M	43	none	lateral	none	roadway	unknown	equipment operator	equipment operator	1796
Struck by equipment	na	na	na	yes	no	and vehicle	private	none	1	0	none	wn	unkno	M	45	none	none	none	none	baghouse	baghouse	spotters	or	1711
Struck by equipment	na	na	na	yes	no	truck	private	none	1	0	none	wn	unkno	M	40	none	none	none	none	hospital	hospital	engineering technician	engineering technician	1711



Struck by equipment	na	na	na	na	yes	no	scraper	project	none	1	0	none	AM	M	22	windrow	lateral	none	none	housing complex	new construction	grade checker	1629
Struck by equipment	na	na	na	na	yes	no	aerial lift	project	none	1	0	none	wn	unkno	17	none	none	none	building	new	floor man operating	1721	
Struck by equipment	na	na	na	na	yes	no	automated work platform	project	none	1	0	none	wn	unkno	38	none	none	none	aircraft maintenan	new	construction	1721	
Struck by equipment	na	na	na	na	yes	no	dump truck	project	none	1	0	none	wn	unkno	35	asphalt	lateral	none	highway repair	under platform when failed	construction	1791	
Struck by equipment	na	na	na	na	yes	no	dumptruck	project	none	1	0	none	wn	unkno	50	none	none	none	roadway	new	construction	1611	
Struck by equipment	na	na	na	na	yes	no	crane	project	bucket	1	0	none	wn	unkno	55	none	none	none	bridge	demolition	construction	1622	
Struck by equipment	na	na	na	na	yes	no	dumptruck	project	none	1	0	none	AM	unkno	500	none	none	none	roadway	unknown	flagger	1622	
Struck by equipment	na	na	na	na	yes	no	truck, pup	by 2 differen	none	1	0	none	AM	unkno	36	none	none	none	roadway	unknown	flagger	1622	
Struck by equipment	na	na	na	na	yes	yes	truck	contra	none	1	0	none	PM	unkno	105	none	none	none	highway	limited access	highway repair	1791	
Struck by equipment	na	na	na	na	yes	no	dumptruck	project	none	1	0	none	wn	unkno	54	none	none	none	highway	highway	highway repair	1622	
Struck by equipment	na	na	na	na	yes	no	truck	private	none	1	0	none	wn	unkno	53	none	none	none	barriers	roadway	unknown	1622	
Struck by equipment	na	na	na	na	yes	no	vehicle head	private	none	1	0	none	night	unkno	50	none	none	none	highway	highway	highway repair	1622	
Struck by equipment	na	na	na	na	yes	no	oilfield pump	painting equipment	none	1	0	none	wn	unkno	46	none	none	none	oilfield production	unknown	highway	1629	
Struck by equipment	na	na	na	na	yes	yes	truck, pickup	project	none	1	1	none	wn	unkno	228	none	none	none	bridge	unknown	bridge	1771	
Struck by equipment	na	na	na	na	yes	yes	dumptruck	project	none	1	0	none	PM	unkno	210	soil cement	lateral	none	bridge	unknown	bridge	1629	
Struck by equipment	na	na	na	na	yes	yes	truck	project	none	1	1	none	wn	unkno	40	soil cement	lateral	none	bridge	unknown	bridge	1771	



Struck by equipment	na	na	>6' no	yes	no	truck, bucket truck	private, project	none	1	0	none	4:35 PM	M	41	light bulbs	altering	none	roadway traffic signals	roadway repair	electrical-traffic	1731
Struck by equipment	na	na	na	yes	no	vehicle	private	none	1	0	none	unkno wn	M	48	traffic controls	none	none	roadway	unknown	laborer	1622
Struck by equipment	na	na	na	yes	no	material hoist	project	none	1	0	none	unkno wn	M	42	none	none	none	unknown	unknown	unknown	1771
Struck by equipment	na	na	na	yes	no	crane	project carrier	personnel	1	0	none	unkno wn	M	49	Pole	hoisting	none	none	unknown	unknown (SIC 1731-electrical)	1731
Struck by equipment	na	na	yes	no	vehicle	private	none	1	0	none	unkno wn	F	52	none	none	none	roadway	unknown	flagger	1611	
Struck by equipment	na	na	na	yes	no	dumptruck	project	none	1	0	none	unkno wn	M	24	none	none	none	roadway	unknown	construction	1611
Struck by equipment	na	na	na	yes	no	grader	project	marker	1	0	none	unkno wn	M	50	earth	lateral	none	none	unknown	laborer	1611
Struck by equipment	na	na	yes	no	vehicle	private	none	1	0	none	8:30 AM	M	41	wood	none	none	new	construction	surveyor	1611	
Struck by equipment	na	na	yes	no	crane	project	none	1	0	none	10:45 AM	M	24	gravel	hoisting	none	interstate	unknown	laborer	1771	
Struck by equipment	na	na	yes	no	backhoe	project	none	1	0	none	unkno wn	M	39	rock	hoisting	none	none	unknown	unloading/loading rocks into bucket	1741	
Struck by equipment	na	na	yes	no	company vehicle	private, project	none	1	0	none	unkno wn	M	27	none	none	none	highway	unknown	site-electrician by trade	1731	
Struck by equipment	na	na	yes	no	dumptruck	project	none	1	0	none	9:35 AM	M	40	asphalt	lateral	none	roadway	repair	asphalt worker	1611	
Struck by equipment	na	na	yes	no	wood chipper	project	none	1	0	none	2:20 PM	M	50	none	none	none	roadway	repair	laborer	1622	
Struck by equipment	na	na	na	yes	no	wood chipper	hood to chipper	project	1	0	none	4:30 PM	M	34	none	none	none	unknown	equipment operator	1795	



Struck by equipment	na	na	na	yes	no	backhoe	project	core	core	1	0	none	unkno	none	none	excavation	unknown	unknown	unknown	unknown	1623			
Struck by equipment	na	na	na	no	yes	none	grinder	1	0	none	unkno	wn	M	43	none	none	pipe	system	unknown	grinder	1799			
Struck by equipment	na	na	na	yes	no	vehicle	private	none	1	2	none	PM	M	26	none	none	traffic	control	roadway	unknown	sod installers	1629		
Struck by equipment	na	na	na	yes	no	trash	compact	project	1	0	none	unkno	wn	M	31	garbage	bags	lateral	none	none	garbage	collector	1611	
Struck by equipment	na	na	na	yes	no	tractor-trailer	unknown	none	1	0	none	unkno	wn	M	33	traffic	controls	lateral	none	bridge	unknown	traffic controller	1611	
Struck by equipment	na	na	na	yes	no	crane	project	none	1	0	none	unkno	wn	M	20	metal roof	decking	hoisting	none	new	construction	upped	1791	
Struck by equipment	na	na	na	yes	no	unknown	vehicle	private	1	0	none	unkno	wn	M	39	none	none	traffic	control	devices	roadway	unknown	drill/boring machine operator	1611
Struck by equipment	na	na	na	yes	no	vehicle	roller	none	1	0	none	unkno	wn	M	38	none	none	none	none	new	construction	flagger	1611	
Struck by equipment	na	na	na	yes	no	compact	project	sump pump	1	0	none	unkno	wn	M	43	none	none	none	none	highway	unknown	unknown	1791	
Struck by equipment	na	na	na	yes	no	semitractor/trail	private	none	1	0	none	AM	M	47	concrete	altering	controls	highway	repair	altering	highway	repair	1611	
Struck by equipment	na	na	na	yes	yes	truck	project	none	1	0	none	unkno	wn	M	17	none	none	none	none	unknown	unknown	flagger	1622	
Struck by equipment	na	na	na	yes	no	trash	city	owned	1	0	none	unkno	wn	M	38	none	none	none	none	dump	unknown	unknown	1799	
Struck by equipment	na	na	na	yes	no	crane	project	none	1	0	none	unkno	wn	M	23	concrete	lateral	crane	crubbing/foot	concrete retaining wall	repair	spotter	1629	
Struck by equipment	na	na	na	yes	no	vehicle	private	none	1	0	none	AM	F	52	none	none	none	none	light rail	new project	construction	flagger	1542	



Struck by equipment	na	na	na	na	na	yes	no	dumptruck	project	none	1	0	1:25	M	58	unknown	lateral	none	unknown	unknown	new	construction	equipment operator	1629	
Struck by equipment	na	na	na	na	yes	no	dump truck	project	none	1	0	10:00	M	51	unknown	lateral	none	unknown	unknown	unknown	new	construction	spotter	1629	
Struck by equipment	na	na	na	na	yes	no	truck	private	none	1	0	unkno	M	19	traffic cone	lateral	none	traffic signal	light	repair	electrical	1731			
Struck by equipment	na	na	na	na	yes	no	scissor lift	project	none	1	0	unkno	M	28	conduit	lateral	none	unknown	unknown	unknown	new	construction	electrical equipment operator	1731	
Struck by equipment	na	na	na	na	yes	no	gradall, dozer	project	none	1	0	12:30	M	20	debris	lateral	none	unknown	unknown	unknown	new	construction	traffic control ktr-electrical?	1731	
Struck by equipment	na	na	na	na	yes	no	vehicle	public	none	1	0	unkno	M	52	sealer for pavement	lateral	none	traffic signal	new	construction	electrical?	1731			
Struck by equipment	na	na	na	na	yes	no	crane	project	boom	1	0	none	M	27	pipe	hoisting	excavation	water main	unknown	glazier	1542				
Struck by equipment	na	na	na	na	yes	no	backhoe	project	none	1	0	11:15	M	19	none	none	trench	unknown	unknown	new	construction	blaster	1711		
Struck by equipment	na	na	na	na	yes	no	pickup truck	private	none	1	0	unkno	M	52	none	none	none	highway	unknown	flagger	1611				
Struck by falling Material	na	na	na	na	yes	no	drilling machine	project	none	1	0	unkno	M	60	tree	none	none	none	new	construction	driller/equipment operator	1799			
Struck by falling Material	na	na	na	na	no	yes	none	none	none	1	0	unkno	M	33	ammonia nitrate, rock	none	protective magazine	none	new	construction	explosive blaster	1611			
Struck by falling Material	na	na	na	na	no	yes	none	none	none	0	2	unkno	M	25:34	none	none	ladder and platform	power generation	new	construction	structural metal workers	1542			
Struck by falling Material	na	na	na	na	yes	no	none	none	none	1	0	unkno	M	45	steel rebar	none	scaffold	building	unknown	new	construction	scaffold up to 18 floor	1741		
Struck by falling Material	na	na	na	na	no	no	snorkel boom	project	none	1	0	7:30	M	28	concrete	hosting	block wall	construction	working on framework	block wall construction	1741				



Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	unkno	M	52	concrete	hoisting	none	unknown	new construction	precast concrete beam	1741		
Struck by falling Material	na	na	na	na	no	yes	log truck	project hammer	1	0	none	PM	M	33	logs	hoisting	none	none	unknown	new construction	precast concrete beam	1521	
Struck by falling Material	na	na	na	na	yes	yes	none	none	1	0	none	unkno	M	28	wood beam	hoisting	none	none	unknown	new construction	precast concrete beam	1521	
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	7:00	AM	39	metal drums	altering	none	none	unknown	welder/cutter	1611		
Struck by falling Material	na	na	na	na	yes	yes	none	none	1	0	none	unkno	M	79	roof beam	none	none	mobile home	demolition	supervisor of demolition crew	1799		
Struck by falling Material	na	na	na	na	yes	yes	none	none	1	0	none	unkno	M	35	wood	altering	formwork	unknown	new construction	mobile home	demolition	1799	
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkno	M	35	stone	none	excavation	stone wall	demolition	carpenter	1741		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkno	M	35	stone	none	excavation	stone wall	demolition	carpenter	1799		
Struck by falling Material	na	na	na	na	yes	no	none	shovel	1	0	none	unkno	M	35	stone	none	excavation	stone wall	demolition	carpenter	1799		
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	unkno	M	53	concrete	none	none	unknown	new construction	carpenter	1741		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkno	M	54	perkins	none	none	building	construction	carpenter	1741		
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	12:45	PM	50	dual tire and axle	none	traffic controls	roadway	repair	emulsion sprayer	operator	1611	
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	unkno	M	59	trees	lateral	none	none	new construction	emulsion sprayer	operator	1623	
Struck by falling Material	na	na	na	na	no	yes	none	backhoe	project	none	1	0	none	unkno	M	34	power pole sections	hoisting	none	utility pole system	demolition	electrician	1623
Struck by falling Material	na	na	na	na	yes	yes	none	none	1	0	none	11:00	AM	39	scaffold	none	scaffold	building	unknown	guard house	demolition	demolisher	1542
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	unkno	M	47	steel	none	none	new construction	precast concrete beam	1799			



Struck by falling Material	na	na	na	na	yes	no	crane	project hammer	vibrating hammer	1	0	none	11-00	AM	23	sheet piling	hoisting	none	unknown	new construction	pile driving operations/cr and ops	1542		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkn, rain	unkn M	44	unkn M	44	concrete plings	hoisting	none	cinder block wall	construction	unknown	1542	
Struck by falling Material	na	na	na	na	yes	no	flatted truck, crane	project slings	1	0	none	unkn wn	unkn M	30	unkn M	30	wood	none	none	house	new construction	operator	1629	
Struck by falling Material	na	na	na	na	yes	no	none	none	0	1	none	unkn wn	unkn M	50	unkn M	50	concrete	none	none	building	new construction	carpenter	1751	
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkn wn	unkn M	21	unkn M	21	masonry wall	none	wall braces	wall	new construction	plumber/pipe fitter	1711	
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	wind	unkn wn	unkn M	20	unkn M	20	trees	alteng	none	dam	new construction	clearing/grub bing new site	1629	
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkn wn	unkn M	29,2	unkn M	29,2	MM 5,35,	none	none	building	new construction	steel worker	1791	
Struck by falling Material	na	na	na	na	yes	no	none	none	1	5	none	unkn wn	unkn M	52	unkn M	52	precast concrete	lateral	none	unknown	unknown	truck driver- equipment operator	1752	
Struck by falling Material	na	na	na	na	no	yes	tractor- trailer	project safety chain	1	0	none	unkn wn	unkn M	15	unkn M	15	wood	none	none	building	unknown	roofer contractor?	1761	
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	unkn wn	unkn M	36,36	unkn M	36,36	MM 25,2	steel columns	none	none	steel structure	new construction	steel workers	1791
Struck by falling Material	na	na	na	na	yes	yes	none	none	1	3	wind	unkn wn	unkn M	37,31	unkn M	37,31	concrete	hoisting	none	stairway	new construction	concrete work	1791	
Struck by falling Material	na	na	na	na	yes	no	hoisting equipm ent	nylon slings	1	0	none	unkn wn	unkn M	60	unkn M	60	steel bar joists	hoisting	building	building	temp steel truss	storage area	unknown	1622
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	unkn wn	unkn M	60	unkn M	60	none	none	none	door	construction	steel worker?	1791	



Struck by falling Material	na	na	na	yes	no	none	none	bulffloat	1	1	none	unkno	M.M.43.25	concrete	lateral	none	concrete sound	garage basement floor	new construction	concrete finishers	1771
Struck by falling Material	na	na	na	no	yes	crane	project	none	1	0	none	unkno	M	24	nuts	lateral	none	demolition	laborer	1611	
Struck by falling Material	na	na	na	yes	no	crane	project	none	1	0	none	unkno	M	48	heat exchanger	hoisting	none	building	unknown	spotter	1711
Struck by falling Material	na	na	na	no	yes	or	excavat	project	none	1	0	none	unkno	M	23	soil	lateral	concrete wall panel	parking garage	equipment operator	1771
Struck by falling Material	na	na	na	no	no	none	none	none	1	0	none	unkno	M	24	concrete pole	none	none	none	unknown	laborer	1771
Struck by falling Material	no	na	na	yes	no	none	none	none	1	0	none	unkno	M	23	sand	none	none	bin	unknown	unknown	1611
Struck by falling material	na	na	na	no	no	none	none	none	1	0	none	4.45	PM	41	wood	none	none	building	new construction	carpenter	1751
Struck by falling Material	na	na	na	no	yes	none	none	saw	1	0	none	11.00	AM	33	wood	altering	none	none	new construction	clearing site	1629
Struck by falling Material	na	na	na	yes	no	forklift	project	slings	1	0	none	2.35	PM	55	2 ton oven	lateral	none	unknown	unknown	directing lift	1796
Struck by falling Material	na	na	na	yes	no	crane	project	none	1	0	none	10.10	AM	59	member	top cross section	hoisting	platform	asphalt storage silo	crane operator- demolisher	1796
Struck by falling Material	na	na	na	yes	no	none	none	torch	1	0	none	unkno	M	41	electrical control panel	altering	none	building	demolition	fire watch for cutter	1796
Struck by falling Material	na	na	na	yes	no	elevator	project	machine	1	0	none	unkno	M	24	welding machine and leads	none	none	building	repair	elevator repairer	1796
Struck by falling Material	na	na	na	no	yes	truck	project	none	1	0	none	unkno	M	62	pipe	lateral	none	none	unknown	laborer	1623
Struck by falling Material	na	na	na	yes	no	none	none	none	1	1	none	unkno	M.M.45.43	debris	none	none	building	demolition	demolisher	1531	



Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	unkno	wn	M	45	wreckage	none	none	hoisting	none	building	unknown	water pumping station	unknown demolition	unknown demolisher	1795
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	2-40	PM	M	25	ac unit	hoisting	none	building	unknown	water pumping station	unknown demolition	unknown demolisher	1795		
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	unkno	wn	M	46	steel pipe	altering	none	building	unknown	water pumping station	unknown demolition	unknown demolisher	1795		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkno	wn	M	34	concrete beam	hoisting	none	building	unknown	water pumping station	unknown demolition	unknown demolisher	1795		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	1	wind	unkno	wn	M	22,?	wooden beams	none	none	building	new construction	new construction	new construction	new construction	1795		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	wind	unkno	wn	M	29	concrete	none	none	building	new	new	new	new	1542		
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	wind	unkno	wn	M	42	steel beam	none	none	building	new	new	new	new	1541		
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	unkno	wn	M	69	tie beam	none	none	building	new	new	new	new	1795		
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	unkno	wn	M	39	shelter	none	none	block walls	demolition	demolition	demolition	demolition	1795		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkno	wn	M	30	column	hoisting	none	house	new construction	new construction	new construction	new construction	1795		
Struck by falling Material	na	na	na	na	no	yes	none	none	1	0	none	2-20	PM	M	45	tree	altering	none	house	new	new	new	new	1795		
Struck by falling Material	na	na	na	na	no	no	none	none	1	0	none	unkno	wn	M	29	debris	none	none	building	demolition	demolition	demolition	demolition	1795		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	2.00	PM	M	56	trees	altering	none	house	new	new	new	new	1794		
Struck by falling Material	na	na	na	na	yes	no	dozer	project	1	0	none	unkno	wn	M	50	wood	none	none	building	demolition	demolition	demolition	demolition	1629		
Struck by falling Material	na	na	na	na	yes	no	none	none	1	0	none	unkno	wn	M	50	wood	none	none	building	demolition	demolition	demolition	demolition	1542		



Struck by falling material	na	na	na	na	yes	no	none	none	none	1	2	none	10.40	M.M.	19.21	building	demolition	laborers	1795	
Struck by falling material	na	na	na	na	no	yes	none	none	none	1	0	none	unkno	M	.31	debris sand/water/cement	lateral	none	unknown-excavator	1794
Struck by falling material	na	na	na	na	yes	no	none	none	none	1	0	none	unkno	M	.62	cantilever brace	building	unknown	unknown-excavator	1794
Struck by falling material	na	na	na	na	yes	no	none	none	none	1	0	none	unkno	M	.45	PIPE	lateral	none	unknown	1623
Struck by falling material	na	na	na	na	yes	yes	none	none	none	1	0	none	unkno	M	.32	none	none	none	laborer	1623
Struck by material	na	na	na	na	yes	yes	none	none	none	1	0	none	unkno	M	.35	rubber bladder/plug:none	none	none	electric power plant	1796
Struck by material	na	na	na	na	no	yes	none	none	rope	1	0	none	unkno	M	.49	steel beam	lateral	none	new construction	steel worker 1791
Struck by material	na	na	na	na	no	yes	none	none	none	1	0	none	unkno	M	.46	concrete	lateral	none	new construction	concrete pallets 1771
Struck by material	na	na	na	na	yes	no	crane	project	none	1	0	none	unkno	M	.25	turning bar	none	none	bridge	1799
Struck by material	na	na	na	na	yes	no	crane	project	slings	1	0	none	unkno	M	.22	tire	altering	none	new	Equipment operator 1522
Struck by material	na	na	na	na	yes	no	crane	project	turning bar	1	0	none	unkno	M	.48	lumber personnel basket and block	lateral	none	unknown	Mechanic 1521
Struck by material	na	na	na	na	yes	no	forklift	project	compressor	1	0	none	unkno	M	.59	block	hoisting	none	new	construction carpenter foreman for cutting operation 1795
Struck by material	na	na	na	na	no	yes	none	none	none	1	0	none	unkno	M	.33	canister body	none	none	unknown	truck driver 1799
Struck by material	na	na	na	na	yes	yes	none	none	none	1	0	none	unkno	M	.44	pile	hoisting	none	unknown	advertising sign 1629
Struck by material	na	na	na	na	no	yes	none	none	none	1	0	none	unkno	M	.39	sign panels	lateral	catwalk	unknown	truck driver 1721



Struck by material	na	na	na	na	yes	no	crane	project	none	1	0	none	3.50	M	48	roof sections/brick wall	hoisting	none	building	demolition	demolisher	1795
Struck by material	na	na	na	na	yes	no	forklift	project	none	1	0	none	unkno	M	39	steel column	lateral	none	building	unknown	removing column from structure	1791
Struck by material	na	na	na	na	no	yes	none	none	none	1	0	none	unkno	M	27	tire	altering	none	unknown	unknown	concrete finisher	1771
Struck by material	na	na	na	na	no	yes	none	none	tire inflator	1	0	none	unkno	M	27	tire	altering	none	unknown	unknown	concrete finisher	1771

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